

# **OPSC Junior Assistant 2014-15 Previous Year Papers**

## Paper - I LANGUAGE TEST (ENGLISH & ODIA)

## **Language Test (English)**

<b>Q1.</b> (a) Use the correct form of the verb of any four of the following:
(i) I will come as soon as I(receive) your letter.
(ii) I(wait) for two hours. I won't wait any longer.
(iii) The examination(begin) tomorrow.
(iv) We arrived at the station before the train(leave).
(V)(do) any of these children know English?
(vi) He(must/can) not be over forty.
(b) Correct the error of any eight of the following:
(i) He lacks in courage.
(ii) Will you present at the meeting tomorrow?
(iii) The Ganga has risen from the Himalayas.
(iv) Take an umbrella in case it may rain.
(v) He resembles like my father.
(vi) We reached at school early.
(vii) We blamed ourself for the accident.
(viii) Who talks much does little.
(ix) What is that animal?
(x) All the plants in my garden are with flowers.
(xi) As I was ill, so   could not attend school.
(xii) He is becoming strong every day.
(xiii) It is pleasure to get such a nice gift.
(c) Change the voice of any two of the following:
(i) The doctor examined the patient.
(ii) He is reading the newspaper.
(iii) Shut the door.
(iv) He has bought two books.
(d) Change into indirect speech of any two of the following:
(i) David said, "I am writing a letter now'.

(ii) "I will work hard to get first class", said Sambit.

(iv) "Bring me a cup of tea", said Anand to Bibek.

(iii) "Don't talk in the class", said the teacher to the boys.

**Q2.** Read the following passage and answer the questions given below:

The habit of reading is one of the greatest resources of mankind; and we enjoy reading books that belong to us much more than if they are borrowed. A borrowed book is like a guest in the house. It must be treated with a certain considerate formality. You must see that it sustains no damage; it must not suffer under your roof. You cannot leave it carelessly, you cannot mark it, and you cannot turn down the pages. And then, some day, although this is seldom done, you really ought to return it.

But your own books belong to you; you treat them with affectionate intimacy. Books are for use, not for show; you should own no book that you are afraid to mark up, or afraid to place on the table, wide open and face down. A good reason for marking favourite passages in book is that this practice enables you to remember more easily the significant sayings.

Everyone should begin collecting a private library in youth; the instinct of private property, which is fundamental in human beings, can here be cultivated with every advantage and no evils. One should have one's own book shelf, which should not have doors, glass windows or keys; they should be free and accessible to the hand as well as to the eye. Most of my indoor life is spent in our room containing six thousand books; and I have a stock answer to the invariable question that comes from strangers. 'Have you read all of these books?''Some of them twice.' This reply is both true and unexpected.

There are of course no friends like living, breathing men and women; my devotion to reading has never made me a recluse. How could it? Books are of the people, by the people, for the people. But bookfriends have this advantage over living friends; you can enjoy the most truly aristocratic society in the world whenever you want. The great dead are beyond our physical reach, and the great living are usually almost as inaccessible. As far our personal friends and acquaintances, we cannot always see them. But in a private library you can at any moment converse with Socrates of Shakespeare or Dickens or Shaw. They wrote for you and did their best to entertain you. You are necessary to them as an audience is to an actor; only instead of seeing them masked, you look into their hearts.

- (a) How would you treat a borrowed book?
- (b) What is the advantage of marking favourite passages in a book?
- (c) How should a book shelf in a private library be?
- (d) How are book friends better than living friends?
- (e) How are authors different from actors?
- Q3. Write an essay on any one of the following (within 250 words):
- (a) Where there's a will there's a way
- (b) A Visit toa Museum
- (c) Importance of Physical Education
- (d) Noise Pollution
- **Q4.** Answer any one of the following in about 150 words:

You have recently joined a hostel. Write a letter to your mother telling her about your life there.

OR

Write a letter to your friend who has recently lost his father.

OR

Write an application to the Chairman of the Municipality emphasizing the need of a library in your area.

OR

Write an application for the post of a teacher in a school.

## **Language Test (Odia)**

## Answer all questions.

- ୧. ଦିଆଯାଇଥିବା ନିର୍ଦ୍ଦେଶ ଅନୁସାରେ ଉତ୍ତର ଦିଅ :
- (କ) ଖେଳଣାଟି ସୁନ୍ଦର ହୋଇଛି |

( ବିସ୍ମୟସ୍ୱଚକ ବାକ୍ୟରେ ପରିଶତ କର)

(ଖ) ଯେ ଲାଞ୍ଚ ଖାଏ, ସେ ଦିନେ ନା ଦିନେ ଧରାପଡେ |

( ସରଳ ବାକ୍ୟରେ ପରିଶତ କର )

(ଗ) ବିଶେଷ୍ୟକୁ ବିଶେଷଣରେ ପରିଣତ କର :

ନୀଳିମା, ପିଇବା

(ଘ) ସନ୍ଧିବିଛେଦ କର :

ସଂସ୍କାର, ମୃଣ୍ମୟ

(ଙ) ଏକପଦରେ ପରିଶତ କର :

ଜାୟା ଓ ପତି, ପଥମାନଙ୍କର ରାଜା

(ଚ) ବିପରୀତାର୍ଥ ଶବ୍ଦ ଲେଖ :

କୀର୍ତ୍ତି, ସାମ୍ୟ

(ଛ) ଶବ୍ଦ ଅଶୁଦ୍ଧଥିଲେ ସଂଶୋଧନ କର :

ସୂର୍ଯ୍ୟପରାଗ, ସୌଜନ୍<mark>ୟତା,</mark> ଦୂରାବସ୍ଥା

(ଜ) ରୂଢି ପ୍ରୟୋଗର ଅର୍ଥ ଦ<mark>ର୍</mark>ଶାଇ <mark>ବାକ୍</mark>ୟଗ<mark>ଠନ କର :</mark>

ଚିତା କାଟିବା, ଘ<mark>ର ଢ଼ିଙ୍କି କୁୟୀର</mark>

(ଝ) କୃଦନ୍ତ ବା ତଦ୍ଧିତ ପ୍ରତ୍ୟୟ ଲଗାଇ ଏକପଦରେ ପରିଶତ କର :

କୃପଣର ଭାବ, <mark>ନିଶା ଅଭ୍ୟାସ ଯାହାର</mark>

(ଞ) କି ସୁନ୍ଦର ଏ ଚିଲିକ<mark>ା ରାଧାନାଥ ଯଥାର୍ଥରେ କହିଛନ୍</mark>ତି :

ଉତ୍କଳ କମଳା <mark>ବିଳାସ ଦୀର୍ଘିକା ( ଉପଯୁକ୍ତ ବିରାମ ଚିହ୍ନ ଦିଅ )</mark>

୨. ଯେ କୌଣସି ଗୋଟିଏ <mark>ବିଷୟରେ ଶବ୍ଦ ମଧ୍ୟରେ ପ୍ରବନ୍ଧ ଲେଖ :</mark>

ଶିକ୍ଷା ଓ ନୈତିକତା, ଜଳ ହିଁ ଜୀବନ

**୩.** ତୁମ ଅଞ୍ଚଳରେ ବେଆଇନ୍ କ୍ରସରଗୁଡିକ ପ୍ରଦୂଷଣ ସୃଷ୍ଟି କରୁଛି | ଏହାର ନିରାକରଣ ପାଇଁ, ଶବ୍ଦ ମଧ୍ୟରେ ଜିଲ୍ଲାପାଳଙ୍କ ପାଖକୁ ଏକ ଦରଖାୟ ଲେଖ |

କିମ୍ବା

ତୁମ ଅଫିସ ପାଇଁ କିଶିବାକୁଥିବା ଦଶଟି କମ୍ପ୍ୟୁଟର ଓ ଦୁଇଟି ଫ୍ରିଜର ପାଇଁ ଜଉମୁଦଦିଆ ଟେଣ୍ଡର ପାଇଁ ଶବ୍ଦରେ ଏକ ବିଜ୍ଞାପନ ଲେଖ |

୪. ଓଡ଼ିଆରେ ଅନୁବାଦ କର :

In these days of nano-technology there are many people who ask: why waste time on literature? Will it help us to conquer outer space, will it help us to produce more gold, better industry or super computer? Behind all such questions there is mistaken idea about the purpose of education and about standards of value. The primary purpose of education is not utilitarian. The main function of education is not to give training for a job, but to produce balanced citizens, not human sponges, to make better and wiser and happier citizens. The greatest writers are continually concerned with these universal problems. The reading of great literature is valuable in itself and needs no apology or explanation that it is delightful, at the same time educational.

## ୫. ନିମ୍ନ ପରିଚ୍ଛେଦଟି ଧ୍ୟାନପ୍ରର୍ବକ ପଢ ଓ ପ୍ରଶ୍ୱଗୁଡିକର ଉତ୍ତର ଦିଅ :

ଲୋକଙ୍କ ଭିତରେ ବେଳେବେଳେ ପ୍ରଳୟ ଆତଙ୍କ କାହିଁକି ଖେଳିଯାଏ, ତା'ର ମନୋବୈଜ୍ଞାନିକ କାରଣ ବିଶ୍ଲେସଣ କରିବା ଜଟିଳ ବିଷୟ । କିଛି ଗୋଟିଏ କାରଣକୁ ଆଶାକରି ପ୍ରଳୟ-ବିଳାସରେ ମାଡିଯିବା ଜନତାର ଏକ ଜଣାଶୁଣା ଦୁର୍ବଳତା । ପୃଥିବୀର ବିଭିନ୍ନ ଦେଶରେ ଜ୍ୟୋଡିଷ ବା ଭବିଷ୍ୟବକ୍ତାମାନେ ପ୍ରଳୟର ଗୋଟିଏ ତାରିଖ ଘୋଷଣା କରିଦେବା ଫଳ<mark>ରେ ନା</mark>ନା କାଣ୍ଡ ଘଟେ | ପଞ୍ଚଗ୍ରହକ୍ଟ ନାଟକଟି ଆମ ଦେଶରେ କୋଡିଏ ପଚିଶ ବର୍ଷରେ ଥରେ ଅଭିନୀତ ହୁଏ | ତା ସାଙ୍ଗକୁ ପୁଣି ବାରହାତ ଖଣ୍ଡା ବ<mark>ାହାରିବା କ</mark>ଥା ରହିଛି | ମାଳିକା କହିଛି, ଭୀମଭୋଇ କହିଛନ୍ତି | ତାଙ୍କକଥା କ'ଶ ମିଛହେବ ? ଏ ପ୍ରକାର ଅହେତ୍ରକ ବିଶ୍ୱାସ ଆମ ସମାଜରେ ଅଯଥା <mark>ଆତଙ୍କ</mark> ଖ<mark>େଳାଏ</mark> |

- (କ) ଜନତାର ଦୁର୍ବଳତା କ'ଶ?
- (ଖ) କାହାକୁ ଏଠାରେ ନାଟକ କୁହାଯାଇଛି ?
- (ଗ) କାହାକଥାକୁ ଆମେ ମିଛବୋଲି କହୁନା ?
- (ଘ) ପଞ୍ଚଗ୍ରହକୃଟ, ବାରହାତ ଖଣ୍ଡା ବିଶ୍ୱାସଟି କି ପ୍ରକାର ବିଶ୍ୱାସ ?
- (ଙ) କାହାକୁ ଏଠାରେ ଜଟିଳ ବି<mark>ଷ</mark>ୟ ବୋଲି କୁହାଯ<mark>ାଇ</mark>ଛି ?

## Paper-II **General Knowledge**

- Q1. Who was the first Indian Governor General of Independent India?
- (a) Lord Louis Mountbatten.
- (b) Jawaharlal Nehru
- (c) Sardar Vallabhbhai Patel
- (d) C. Rajagopalchari
- Q2. Who of the following is the President of Sri Lanka?
- (a) Maithripala Sirisena
- (b) Chandrika Kumartu
- (c) Mahinda Rajapakshe
- (d) K.M. De Silva
- **Q3.** The language of the discourses of Gautam Buddha was:
- (a) Bhojpuri
- (b) Magadhi
- (c) Pali
- (d) Sanskrit

<b>Q4.</b> Who of the following visited Nalanda University during the reign of King Harsha? (a) Hieun Tsang (b) - Fahien
(c) Megasthenes
(d) None of these
a) None of these
$\mathbf{Q5.}$ The theory of economic drain of India during British imperialism was propounded by
(a) M.K.Gandhi
(b) Jawaharlal Nehru
(c) Dadabhai Naoroji
(d) R.C.Dutt.
<b>Q6.</b> The founder of All India National Congress was
(a) A.O. Hume
(b) Jawaharlal Nehru
(c) M.K. Gandhi
(d) Subhas Chandra Bose
<b>Q7.</b> The Prime Minister is the Chairman of
(a) NITI Aayog
(b) Union' Public Service Commission
(c) Finance Commission
(d) Minorities Commission
Q8. Which State of India records the highest production of tea ? (a) West Bengal . (b) Kerala (c) Tamil Nadu (d) Assam
Q9. Which of the following Is not a Union Territory? (a) Arunachal Pradesh (b) Lakshadweep (c) Andaman & Nicobar Islands (d) Pudduchery
Q10. Which of the following countries hosted SAARC Summit 2014 (a) India (b) Sri lanka (c) Nepal (d) Bangladesh
Q11. Which of the following countries is not a member of ASEAN?

(b) Thailand

(c) Singapore(d) Phillippines

## Q12. Who of the following is the Prime Minister of Australia

- (a) Angela Merkel
- (b) Tony Abbott
- (c) David Cameroon
- (d) Vladimir Putin

## **Q13.** Renowned dancer Sitara Devi was an exponent of which classical dance form?

- (a) Bharatnatyam
- (b)Kathakali
- (c) Odissi
- (d) Kathak

## **Q14.** What is end name of the auto biography of Sachin Tendulkar

- (a) Playing it my way
- (b) Cricket my life
- (c) On the edge of fire
- (d) Playing for the play

#### **Q15.** Train to Pakistan was written by

- (a) amrita Pritam
- (b) Khushwant singh
- (c) Benazir Bhutto
- (d) Z.A.Bhutto

## **Q16.** For which of the following films Kangana ranawat received the national award for best actress

- (a) Gangster
- (b) Fashion
- (c) Queen
- (d) Highway

#### Q17. Who discovered Penicillin

- (a) Alexander Fleming
- (b) William Harvey
- (c) Joseph Lister
- (d) Madam Curie

#### Q18. The 2014 Asian Games was held in:

- (a) South Korea
- (b) Japan
- (c) China
- (d) Thailand

### **Q19.** The Wheeler island is famous for :

- (a) Crocodile Breeding
- (b) Remote Sensing
- (c) Launching of Missiles
- (d) Fishing

Q20. Which of the following countries is known as Land of the Midnight Sun?  (a) Norway  (b) Finland  (c) Switzerland  (d) Japan
Q21. Which of the following was created the 29th state of India (a) Uttarakhand (b) Telengana (c) Jharkhand (d) Chhattisgarh
Q22. Which of the following countries does not enjoy veto power in UN Security Council?  (a) China (b) India (c) USA (d) UK
Q23. International Human Rights Day is celebrated (a) 10th December (b) 10th March (c) 1st December (d) 24th October
Q24. W. Rontgen is associated with the discovery of: (a) X Ray (b) Stethoscope (c) Thermometer (d) Ultrasound
Q25. Who among the following has authored the Book 'Hind Swaraj?  (a) Bal Gangadhar Tilak  (b) Mahatma Gandhi  (c) Gopal Krishna Gokhale  (d) M.G. Ranade
Q26. In which Of the following States kandla port is situated (a) Goa (b) Gujarat (c) Kerala (d) Karnataka
Q27. The Headquarters of International Court Of Justice is located at (a) New York (b) The Hague (c) Paris (d) Washington

(a) Lord Ripon (b) Lord Lytton (c) Lord Powell (d) Lord Clive
Q29. The gases most responsible for global warming are: (a) Carbon dioxide and Methane (b) Ammonia and Butane (c) Radon and Nitrogen (d) Ozone and Hydrogen Chloride
Q30. Irani Trophy is associated with which of the following games ? (a) Badminton (b) Golf (c) Cricket (d) Football
Q31. Kalhana's work 'Rajatarangini' is an important source material for the study of which one of the following:  (a) Ancient Kamrupa (b) post Mauryan Magadha (c) Medieval Rajasthan (d) Early Medieval Kashmir
Q32. Who Is the author of the god of Small Things?  (a) Arundhati Roy  (b) Kiran Desai  (c) Salman Rushdie  (d) V.S. Naipaul
Q33. An Inconvenient Truth' is a film directed by Al Gore to promote public awareness about: (a) Terrorism (b) Global Warming (c) Nuclear Threat (d) Communalism
Q34. Who is the father of Immunology? (a) Louis Pasteur (b) Robert Koch (c) Landsteiner (d) Edward jenner
Q35. Which of the following fossil fuels is the cleanest fuel?  (a) Coal  (b) Petrol  (c) Natural Gas  (d) Diesel

<b>Q36.</b> Meghnad Shah is known for his contribution in which of the following fields?
(a) Physics
(b) Medical Science
(c) Environmental Science
(d) History

- Q37. Ozone Layer of the Earth's atmosphere is important for living organisms because it
- (a) Prevents entry of ultraviolet rays
- (b) Prevents entry of X-rays
- (c) Maintains level of Oxygen on Earth
- (d) Prevents acid rain on earth
- **Q38.** Hygrometer is an instrument which measures
- (a) Electric Current
- (b) Level of Humidity
- (c) Depth of the Ocean
- (d) Magnetic Flux
- **Q39.** Who is the United States of America's Ambassador to india?
- (a) Albert Peter Burlelgh
- (b) Nadir Powell Patel
- (c) Kathleen Stephens
- (d) Richard Rahul Verma
- **Q40.** Who invented Dynamo?
- (a) Michael Faraday
- (b) Gutenberg
- (c) MacMillan
- (d) Pascal
- **Q41.** What is Bachpan Bachao Andolan?
- (a) It is a movement to provide primary education to all children
- (b) Supreme Court's Directive to: Schools to reduce the weight of school bags
- (c) A movement in India Protecting the rights of children
- (d) A movement in Pakistan to protect the girl child
- **Q42.** Which of the following statements is closely associated with Boko Haram?
- (a) It is an organization opposed to Western education in Nigeria
- (b) It is fighting for freedom against . the oppressive Nigerian Regime
- (c) It is an arm of the Nigerian government to promote Islam
- (d) It is an organization set up for abducting women
- **Q43.** Where is the Headquarters of UNESCO?
- (a) Washington
- (b) Beijing
- (c) Tokyo
- (d) Paris

(a) Chile (b) Australia (c) USA (d) Indonesia
Q45. Which continent of the world does not have a desert?  (a) Australia (b) Europe (c) Asia (d) North America
Q46. Which of the following political leaders was recently awarded bharat ratna (a) A.B. Vajpayee (b) Sonia Gandhi (c) L.K.Advani (d) Biju Patnaik
Q47. Who is the Union Cabinet Minister of Human Resources Development?  (a) Murli Manohar Joshi  (b) Arun Jaitley  (c) Uma Bharti  (d) Smriti Irani
Q48. Who of the following is the author of the famous book Das Capital'?  (a) Adam Smith  (b) Karl Marx  (c) Rousseau  (d) Voltaire
Q49. In which of the following States of India Loktak lake situated? (a) Manipur (b) Assam (c) Jammu & Kashmir (d) Meghalaya
<ul><li>Q50. Cloudy nights are warmer compared to clear cloudness nights, because clouds:</li><li>(a) Prevent cold waves from the sky form descending on earth</li><li>(b) Reflect back the heat given off by Earth</li><li>(c) Produce heat and radiate it towards Earth</li><li>(d) Absorb heat form the atmosphere and send it towards earth</li></ul>
<b>Q51.</b> Acid Rain is caused by the pollution Of the environment by: (a) Carbon dioxide and Nitrogen

(b) Carbon monoxide and Carbon dioxide

(d) Nitrous oxide and Sulphur dioxide

(c) Ozone and Carbon oxide

## **Q52.** Who invented Dynamite?

- (a) Alfred Nobel
- (b) Charles Boyle
- (c) Samuel Cohen
- (d) H.W. Seeley

### Q53. How is Ban Ki-moon known as?

- (a) President of South Korea
- (b) Head of World Bank
- (c) A famous scientist of Genetic Engineering
- (d) Secretary-General of UN

## **Q54.** Which of the following is the capital of Canada?

- (a) Ottawa
- (b) Toronto
- (c) Montreal
- (d) Bogota

#### **Q55.** What does FDI stand for?

- (a) Foreign Development Invest ment
- (b) Foreign Direct Investment
- (c) French Development Institute
- (d) Foreign Development Institute ment

## **Q56.** Ebola Is a:

- (a) Terrorist Organisation
- (b) Deadly Virus
- (c) AIDS Test
- (d) An animal in Africa

## Q57. Where is the Headquarters of WHO located?

- (a) Geneva
- (b) New York
- (c) Manila
- (d) Paris

## **Q58.** Indus Water Treaty is a pact on sharing of river water between India and.

- (a) Bangladesh
- (b) Pakistan
- (c) Nepal
- (d) Afghanistan

## **Q59.** Who of the following is not a recipient of Jnanpith Award?

- (a) Prativa Ray
- (b) Sitakanta Mahapatra
- (c) Gopinath Mohanty
- (d) Manoj Das

<b>Q60.</b> From which of the following space station was Mangalayan launched? (a) Sriharikota
(b) Balasore
(c) Thumba
(d) Wheeler island
Q81. Neutron was discovered by:
(a) Mosley
(b) Rutherford
(c) Thomson (d) Chadwick
(a) Gliadwick
<b>Q82.</b> The recipients of Nobel Peace Prize for the year 2014 belong to:
(a) India and Pakistan
(b) China and Japan (c) USA and UK
(d) Australia and New Zealand
<b>Q83.</b> Which one of the following mathematician invented decimal place value?
(a) Bhaskar
(b) Varahamihira
(c) Brahmagupta (d) Aryabhatta
(a) Thy abhacta
<b>Q84.</b> Which among the following is the largest rubber producing State in India?
(a) Karnataka (b) Tamil Nadu
(c) Kerala
(d) Maharashtra
OOF Which Ook - Falls - to talk - and - at last - at - at - at - at -
Q85. Which Of the Following is Known as the pink city of India?  (a) Udaipur
(b) Jaipur
(c) Hyderabad
(d) Ahmedabad
<b>Q86.</b> The Sarkaria Commission Report deals with which one of the following.
(a) Corruption in India
(b) Center-State Relations
(c) Local Governance
(d) Inter-State Dispute
<b>Q87.</b> The concept of Human Rights primarily emphasizes on:

(a) Right to Property (b) Right to Equality (c) Right to Religion

(d) Dignity of Man as a human being.

Q88. The minimum land area recommended for forest cover to. maintain proper ecological balance in India is (a) 25% (b) 33% (c) 43% (d) 53%
Q89. Who is the Chief Justice of India? (a) R.M. Lodha (b) H.L.Dattu (c) K.G.Balakrishnan (d) Altamas Kabir
Q90. Where was 35 <sup>th</sup> National games of 2015 held?  (a) Kerala (b) Tamil Nadu (c) Punjab (d) Andhra Pradesh
Q91. Where Is Bhabha Atomic Research Center located?  (a) Mumbai  (b) Delhi  (c) Pune  (d) Chennai
<b>Q92.</b> The Battle of Plassey was fought in the year: (a) 1557 (b) 1857 (c) 1657 (d) 1757
Q93. In which of the following cities the Statue of Liberty is situated (a) New York (b) Washington (c) Paris
<ul> <li>(d) London</li> <li>Q94. The term 'Sustainable development has been derived from:</li> <li>(a) The Brundtland Commission Report</li> <li>(b) The United Nations Conference on Sustainable Development</li> <li>(c) The Millennium Development Goals</li> <li>(d) The Earth Summit</li> </ul>
Q95. India exploded its first nuclear device in the year (a) 1976 (b) 1974 (c) 1994 (d)1991  13 Adda247 Odia   Adda247 Odia Youtube Channel   Adda247 Odia Facebook   Adda247 Odia Telegram

<b>Q96.</b> Who is the Chief Election Commissioner of India?
(a) H.S. Brahma
(b) N. Gopalaswami
(c) Kuldip Singh

## **Q97.** In which State is Kudankulam Nuclear Power Plant located?

- (a) Karnataka
- (b) Tamil Nadu

(d) Dr. Nasim Zaidi

- (c) Kerala
- (d) Maharashtra

## **Q98.** With which game Saina Nehwal is associated?

- (a) Badminton
- (b) Tennis
- (c) Chess
- (d) Table Tennis

## **Q99.** Which day is observed as National Science Day?

- (a) 28th February
- (b) 8th March
- (c)1st December
- (d) 10th January

## **Q100.** What is the currency of Japan?

- (a) Yuan
- (b) Yen
- (c) Won
- (d) Dinar

## Paper - III **Mathematics & Basic Computer Skills**

### **MATHEMATICS**

## **Q1.** The cube root of 0.000216 is:

- (a) .6
- (b) .06
- (c).7
- (d) .87

## **Q2.** $.0169 \times ? = (1.3)^2$

- (a) 100
- (b) 10
- (c) 1000
- (d) None of these

**Q3.** If  $\sqrt{1 + \frac{x}{144}} = \frac{15}{13}$  then value of x is:

- (a) 47
- (b) 48.2
- (c) 47.72
- (d) 46.22

**Q4.** If  $x = \frac{\sqrt{3}+1}{\sqrt{3}-1}$  and  $y = \frac{\sqrt{3}-1}{\sqrt{3}+1}$  then the value of  $x^2 - y^2$  is:

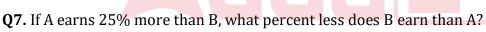
- (a)  $10\sqrt{3}$
- (b)  $8\sqrt{3}$
- (c) 14
- (d) 12

**Q5.** A fruit seller had some apples. He sells 40% apples and still had 420 apples. So originally he had:

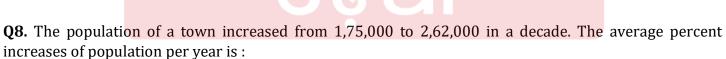
- (a) 588 apples
- (b) 600 apples
- (c) 672 apples
- (d) 700 apples

**Q6.** Rajeev buys goods worth ₹6650 and he gets a rebate of 6% on it. After getting rebate he pays sales tax @ 10%. Find the amount he will have to Pay for goods:

- (a) ₹6878.10
- (b) ₹6999.20
- (c) ₹6654
- (d) ₹7000



- (a) 10%
- (b) 20%
- (c) 25%
- (d) 30%



- (a) 6%
- (b) 5%
- (c) 4.37%
- (d) 8.75%

**Q9.** In the first 10 overs of a cricket game the run rate was 3.2. What should be the run rate in the remaining 40 overs to reach the target of 280 runs?

- (a) 6.2
- (b) 6.25
- (c) 7
- (d) 7.25

the average weight of 16 boys in a Class is 50.25 kg and that of the remaining 8 boys is 45.15 kg. Find the average weight of all the boys in the class:  (a) 48.55  (b) 47.25  (c) 48  (d) 49.55
Q11. The average of 100 numbers is 44. The average of these 100 numbers and 4 other new numbers is 50. What is the average of the 4 new numbers?  (a) 800  (b) 176  (c) 200  (d) 24
Q12. The average of two numbers A and B is 20, that of B and C is 19 and of C and A is 21. Find the value of A:  (a) 20 (b) 22 (c) 24 (d) 18
<b>Q13.</b> A person borrows $\$500$ for $1^1_2$ years at 2 paise simple interest per month. Find the interest he has to
pay: (a) ₹210 (b) ₹180 (c) ₹232 (d) ₹184.50
<b>Q14.</b> If a sum of money at simple interest doubles in 12 years find the rate of Interest per annum : (a) $8^1_3\%$ (b) $16^2_3\%$ (c) $7.5\%$ (d) $10\%$
<b>Q15.</b> Find the compound interest for 3 years when the principal is $\$800$ and rate of interest is $5\%$ : (a) $\$962.20$ (b) $\$926.10$ (c) $\$900$ (d) $\$856.50$
<b>Q16.</b> A car costs $\[ \]$ 16,000. When it is used by the owner its price decreases at the rate of 5% per year. What will be its price after 3 years ? (a) $\[ \]$ 1400 (b) $\[ \]$ 13718 (c) $\[ \]$ 15615 (d) $\[ \]$ 15000

<b>Q17.</b> Find the Tax payable when Taxable income is $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$
<b>Q18.</b> Manas bought a watch costing $\[ 1,650 \]$ . If the amount includes 10% Sale Tax on the list price, find the list price of the watch: (a) $\[ 1,550 \]$ (b) $\[ 1,650 \]$ (c) $\[ 1,600 \]$ (d) $\[ 1,500 \]$
<b>Q19.</b> A company with 10,000 shares of nominal value 100 declares an annual dividend of 8% to the share holders. Find the amount of dividend paid by the company : (a) $\neq$ 80,000 (b) $\neq$ 88,800 (c) $\neq$ 88,800 (d) $\neq$ 80,800
<b>Q20.</b> How much should a man invest in $\stackrel{?}{_{\sim}}$ 10 shares selling in $\stackrel{?}{_{\sim}}$ 13 each to obtain an income of $\stackrel{?}{_{\sim}}$ 150 if the dividend declared by the company is 15%? (a) $\stackrel{?}{_{\sim}}$ 1,300 (c) $\stackrel{?}{_{\sim}}$ 1,500 (d) $\stackrel{?}{_{\sim}}$ 1,530
Q21. A sells an article to B at a profit of 10%. B sells the article back to A at a loss of 10%. In this transaction the profit of A is:  (a) 11%  (b) 20%  (c) 15%  (d) 12%
<b>Q22.</b> If a man was to sell his chair for ₹ 720, he would lose 25%. To gain 25% he should sell it for: (a) ₹ 1,000 (b) ₹ 1,200 (c) ₹ 1,960 (d) ₹ 1,900
Q23. The listed price of a shirt is 270 and it is available at 237.60. Find the rate of discount: (a) 10% (b) 12% (c) 14% (d) 16%

Q24. Find the discount equivalent to successive discounts of 20% and 10%: (a) 25% (b) 27% (c) 28% (d) 17%
<b>Q25.</b> Find the mean of the following data: 10, 15, 12, 16, 15, 10, 14, 15, 12, 10 (a) 15 (b) 12.9 (c) 11.8 (d) 13
Q26. Find the median of the first five odd integers: (a) 5 (b) 3 (c) 4 (d) 6
Q27. The mean of five data is 10. If a new variate is included then the mean becomes 11. Find the sixth data:  (a) 16 (b) 11 (c) 18 (d) 14  Q28. Find the median of the following: 7, 7, 10, 6, 7, 9, 8, 7, 6, 7, 8, 9, 6, 6, 7,6,7,7,8  (a) 6
(b) 7 (c) 8 (d) 9 <b>Q29.</b> A can do a work in 15 days and Bin 20 days. If they work on it together for 4 days then the fraction of the work that is left is : (a) $\frac{1}{4}$
(b) $\frac{7}{15}$ (c) $\frac{8}{15}$ (d) $\frac{1}{10}$
Q30. 4 men and 6 women can complete a work in 8 days while 3 men and 7 women can complete the same in 10 days. In how many days will 10 women complete the work?  (a) 35  (b) 40  (c) 45  (d) 50

Q31. P works twice as fast as Q. If Q alone can complete the work in 12 days, the number of days in which both P and Q can together finish is:  (a) 4  (b) 6  (c) 8  (d) 18
Q32. Reena can do a piece of work in 20 days and Meena is 25% more efficient than Reena. The number of days taken by Meena to do the same piece of work is:  (a) 15  (b) 16  (c) 25  (d) 18
$\bf Q33.$ A man on tour travels first 160 km at 64 kmph and the next 160 km. at 80 kmph. The average speed of the $1^{st}$ 320 km of the tour is : A) 35.55 kmph (b) 71.11 kmph (c) 71 kmph (d) 36 kmph
<b>Q34.</b> A car travelling with $\frac{5}{7}$ of its actual speed covers 42 km in 1 hour 40 min 48 sec. Find the actual speed of the car: (a) 35 kmph (b) 45 kmph (c) 53 kmph (d) 55 kmph
Q35. Buses start from a Bus Terminal with a speed of 20 kmph at 10 mins. interval. What is the speed of a man coming from opposite direction towards the Bus Terminal if he meets the Buses at an interval of 8 minutes?  (a) 3 kmph  (b) 4 kmph  (c) 5 kmph  (d) 6kmph
Q36. Two men start together from the same place in the same direction to go round a circular path. If one takes 10 mins and the other takes 15 mins to make one complete round, they will meet after:  (a) 40 mins (b) 30 mins (c) 45mins (d) 33mins
<b>Q37.</b> If the work done by $(x-1)$ men in $(x+1)$ days are in the ratio $5:6$ to the work done by $(x+1)$ man in $(x+2)$ days then find $x$ : (a) 15 (b) 16 (c) 14 (d) 17

<b>Q38.</b> The monthly salaries of two persons are in the ratio $3:5$ . If each receives an increase of $\mathbb{Z}$ 20 in salary the ratio changes to $13:21$ . Find their salaries : (a) $\mathbb{Z}$ 240 & $\mathbb{Z}$ 400 (b) $\mathbb{Z}$ 200 & $\mathbb{Z}$ 440 (c) $\mathbb{Z}$ 240 & $\mathbb{Z}$ 320 (d) None of these
Q39. What should be added to each term of the ratio 7:13 so that the ratio becomes 2:3? (a) 15 (b) 5 (c) 3 (d) 8
<b>Q40.</b> Find the number which bears the same ratio to $\frac{8}{55}$ that $\frac{7}{9}$ does to $\frac{2}{33}$ :  (a) $\frac{28}{15}$ (b) $\frac{18}{25}$ (c) $\frac{13}{27}$ (d) $\frac{25}{28}$
<b>Q41.</b> In what ratio must water be mixed with milk to gain 20% by selling the mixture at cost price ? (a) $1:5$ (b) $5:6$ (c) $2:3$ (d) $1:6$ <b>Q42.</b> In what ratio must rice at $ \  \  \  \  \  \  \  \  \  \  \  \  \$
(a) 5:7 (b) 8:7 (c) 3:7 (d) 2:8
<b>Q43.</b> In what ratio must a grocer mix two varieties of tea worth ₹ 60 per kg and ₹ 65 per kg so that selling of mixture at ₹ 68.20 per kg he may gain10%? (a) 3:2 (b) 3:4 (c) 3:5 (d) 4:5
<b>Q44.</b> A dishonest milkman professes to Sell his mik at cost price but he mixes it with water and thereby gains 25%. The percentage of water in the mixture is : (a) $4\%$ (b) $6_4^1\%$ (c) $20\%$ (d) $25\%$

<b>Q45.</b> A, B and C started a business by investing $\[ \] 1,20,00, \] 1,35,000$ and $\[ \] 1,50,000$ respectively. Find the share of A out of an annual profit of $\[ \] 56,700$ :  (a) $\[ \] 18,000$ (b) $\[ \] 16,800$ (c) $\[ \] 18,900$ (d) $\[ \] 17,600$
<b>Q46.</b> Kamal started a business by investing $\stackrel{?}{_{\sim}}$ 50,000. After 6 months Nanda joined him with a capital of $\stackrel{?}{_{\sim}}$ 80,000. After 3 years they earned a profit of $\stackrel{?}{_{\sim}}$ 24,500. Find Kamal's share in the profit : (a) $\stackrel{?}{_{\sim}}$ 9,423 (b) $\stackrel{?}{_{\sim}}$ 10,500 (c) $\stackrel{?}{_{\sim}}$ 12,500 (d) $\stackrel{?}{_{\sim}}$ 14,000
<b>Q47.</b> A, B, C hired a car for $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$
<b>Q48.</b> Deepak ,Anand and Simran entered in partnership. Deepak invests 3 times what Anand invests and Anand invests $\frac{2}{3}$ rd of what Simran invests. At the end of the year the profit earned is $\frac{2}{3}$ 6,600. Find the share of Anand: (a) $\frac{1}{3}$ 1,600 (b) $\frac{1}{3}$ 1,200 (c) $\frac{1}{3}$ 1,400 (d) $\frac{1}{3}$ 1,000 <b>Q49.</b> An aeroplane flies along the four sides of a square field at the speed of 200, 400, 600 and 800 kmph. Find the average speed of the plane round the field: (a) 278 kmph
(b) 365 kmph (c) 384 kmph (d) 247 kmph
Q50. A boat goes 7 km upstream in 42 mins. and the speed of the stream is 3 kmph. Find the Speed of the boat in still water: (a) 4.2 kmph (b) 9 kmph (c) 13 kmph (d) 21 kmph
BASIC COMPUTER SKILLS
Q51. An icon represents:  (a) A Program  (b) A file  (c) Both (A) and (B)  (d) None of the above

Q52. To close a window press:
(a) Ctrl + W
(b) Ctrl + F4
(c) Alt + C
(d) Alt + F4
Q53. Ais a window component that is designed to store other components so that these can be organized efficiently.  (a) Document  (b) Window  (c) Folder  (d) All of the above
<b>Q54.</b> are the list of commands that appear on screen.
(a) Windows
(b) GUIS
(c) Icons
(d) Menus
Q55. To change the way items are displayed in windows, we should use:
(a) View menu
(b) Control menu
(c) Mouse
(d) All of the above
Q56. How many columns of items does a Classic start menu contain? (a) 1 (b) 2 (c) 3 (d) Can't be determined
Q57is used to display the System menu for the active window.
(a) Shift + F 10
(b) Ctrl + tab
(c) Alt + esc
(d) Alt + spacebar
<b>Q58.</b> What is the shortcut key to open my computer ? (a) Windows + E
(b) Windows + F
(c) Windows +F1
(d) Windows +A
Q59. The screen saver automatically starts when the computer is idle for the number of minutes specifie
in
(a) Time (b) Wait
(c) Display
(d) None of these

Q60. The bottom bar of the windows is known as: (a) Task bar (b) Menu bar (c) Click bar (d) Title bar
Q61. You can't close MS Word by: (a) Choosing file menu then exit submenu (b) Press Alt + F4 (c) Click X button on title bar (d) From file menu choose close submenu
Q62. What is the shortcut key to open the OPEN dialogue box in MS Word?  (a) F12  (b) Alt + F12  (c) Ctrl + F12  (d) Shift+F12  Q63. Which files starts MS Word?  (a) Winword.exe  (b) Word.exe  (c) Msword.exe  (d) Word2003.exe
Q64. Background color or effects applied on a document in MS Word is not visible in:  (a) Web layout view  (b) Print layout view  (c) Reading view  (d) Print preview
Q65. Pressing F8 key 5 times in MS Wordselects: (a) A word (b) A sentence (c) A paragraph (d) Entire document
Q66. What is the shortcut key you can press to create a copyright symbol in MS Word?  (a) Alt + Ctrl +C  (b) Alt + C  (c) Ctrl + C  (d) Ctrl + Shift +C
Q67. Which of the following function key activates the speller in MS Word? (a) F5 (b) F7 (c) F9 (d) Shift + F7

Q69. In MS Word, portrait and landscape features are:  (a) Page orientation (b) Paper size (c) Page display (d) All of the above  Q70. The Ctrl +H command in MS Word is used to: (a) Hide data (b) Find and replace (c) Save (d) Copy  Q71. Which is the shortcut key to insert a new slide in current presentation? (a) Ctrl + N (b) Ctrl + M (c) Ctrl + S (d) All of the above  Q72. From which menu you can access picture, text box and chart in PowerPoint: (a) File (b) Edit (c) Insert (d) View  Q73. Which of the following font effects are not available in PowerPoint font dialogue box? (a) Underline (b) Shadow (c) Emboss (d) Strikethrough  Q74. The effect applied to display when, slides change in slide show view is: (a) Slide animation (b) Custom animation (c) Custom transition (d) Slide transition  Q75. To start slide show of a presentation: (a) Hit F5 key (b) From slide show menu choose view show option (c) From slide show menu choose rehearse timing	Q68. What is the maximum number of columns that can be made in a MS Word document? (a) 6 (b) 10 (c) 12 (d) 16
(a) Hide data (b) Find and replace (c) Save (d) Copy  Q71. Which is the shortcut key to insert a new slide in current presentation? (a) Ctrl + N (b) Ctrl + M (c) Ctrl + S (d) All of the above  Q72. From which menu you can access picture, text box and chart in PowerPoint: (a) File (b) Edit (c) Insert (d) View  Q73. Which of the following font effects are not available in PowerPoint font dialogue box? (a) Underline (b) Shadow (c) Emboss (d) Strikethrough  Q74. The effect applied to display when, slides change in slide show view is: (a) Slide animation (b) Custom animation (c) Custom transition (d) Slide transition  Q75. To start slide show of a presentation: (a) Hit F5 key (b) From slide show menu choose view show option	(a) Page orientation (b) Paper size (c) Page display
(a) Ctrl + N (b) Ctrl + M (c) Ctrl + S (d) All of the above  Q72. From which menu you can access picture, text box and chart in PowerPoint: (a) File (b) Edit (c) Insert (d) View  Q73. Which of the following font effects are not available in PowerPoint font dialogue box ? (a) Underline (b) Shadow (c) Emboss (d) Strikethrough  Q74. The effect applied to display when, slides change in slide show view is: (a) Slide animation (b) Custom animation (c) Custom transition (d) Slide transition  Q75. To start slide show of a presentation: (a) Hit F5 key (b) From slide show menu choose view show option	(a) Hide data (b) Find and replace (c) Save
(a) File (b) Edit (c) Insert (d) View  Q73. Which of the following font effects are not available in PowerPoint font dialogue box? (a) Underline (b) Shadow (c) Emboss (d) Strikethrough  Q74. The effect applied to display when, slides change in slide show view is: (a) Slide animation (b) Custom animation (c) Custom transition (d) Slide transition  Q75. To start slide show of a presentation: (a) Hit F5 key (b) From slide show menu choose view show option	(a) Ctrl + N (b) Ctrl + M (c) Ctrl + S
(a) Underline (b) Shadow (c) Emboss (d) Strikethrough  Q74. The effect applied to display when, slides change in slide show view is: (a) Slide animation (b) Custom animation (c) Custom transition (d) Slide transition  Q75. To start slide show of a presentation: (a) Hit F5 key (b) From slide show menu choose view show option	(a) File (b) Edit (c) Insert
<ul> <li>(a) Slide animation</li> <li>(b) Custom animation</li> <li>(c) Custom transition</li> <li>(d) Slide transition</li> <li>Q75. To start slide show of a presentation:</li> <li>(a) Hit F5 key</li> <li>(b) From slide show menu choose view show option</li> </ul>	(a) Underline (b) Shadow (c) Emboss
(a) Hit F5 key (b) From slide show menu choose view show option	(a) Slide animation (b) Custom animation (c) Custom transition
(d) Both (A) and (B)	(a) Hit F5 key (b) From slide show menu choose view show option (c) From slide show menu choose rehearse timing

<ul><li>Q76. Which tab is not available on left panel when you open a presentation?</li><li>(a) Outline</li><li>(b) Slides</li><li>(c) Notes</li><li>(d) Both (A) and (B)</li></ul>
<ul><li>Q77. In order to edit a chart, you can:</li><li>(a) Triple click the chart object</li><li>(b) Click and drag the chart object</li><li>(c) Double click the chart object</li><li>(d) Click the chart object</li></ul>
<ul> <li>Q78. To exit PowerPoint:</li> <li>(a) Click the application minimize button</li> <li>(b) Click the document close button</li> <li>(c) Double click the application control menu icon</li> <li>(d) Double click the document control menu icon</li> </ul>
<ul><li>Q79. How can you create a uniform appearance by adding a background image to all slides?</li><li>(a) Create a template</li><li>(b) Edit the slide master</li><li>(c) Use the autocorrect wizard</li><li>(d) All of the above</li></ul>
Q80. In Microsoft PowerPoint in order to see all the slides on one screen Use: (a) View, slide sorter (b) View, slide (c) View, master (d) View, slide show
Q81. Which of the following keyboard a shortcut can be used for creating a references a chart from the selected cells?  (a) F11  (b) F10  (c) F4
<ul> <li>(d) F2</li> <li>Q82. Which of the following is not associated with spelling dialogue box in MS Excel?</li> <li>(a) Edit</li> <li>(b) Ignore</li> <li>(c) Ignore all</li> <li>(d) Change</li> </ul>
Q83. What term describes a background that appears as a gradual change of colors in a chart in MS Excel? (a) Pattern (b) Gradient (c) Texture (d) Velvet

Q84. When you copy a formula:  (a) Excel erases the original copy of the formula  (b) Excel edits cell references in the newly copied formula  (c) Excel adjusts absolute cell  (d) Excel doesn't adjust relative cell references
Q85. What function displays row data in a column or column data in a row?  (a) Transpose (b) Index (c) Rows (d) Hyperlinks
Q86. Except which of the following functions, a formulae with a logical function shows the word TRUE and FALSE as a result:  (a) NOT  (b) OR  (c) IF  (d) AND
Q87. In MS Excel a typical worksheet by default has number of columns.  (a) 128  (b) 256  (c) 512  (d) 1024
Q88. What is the shortcut key to insert new comment in a cell?  (a) F2  (b) Alt + F2  (c) Ctrl + F2  (d) Shift + F2
Q89. What is the shortcut key to insert new sheet in current workbook?  (a) F11  (b) Alt + F11  (c) Ctrl + F11  (d) Shift + F11
Q90. What will be the result if you type =A1 = B1 in cell C1?  (a) Yes or No  (b) True or False  (c) Value of A1  (d) Value of B1
Q91. Microsoft access is a: (a) RDBMS (b) OODBMS (c) ORDBMS (d) Network database model

<ul> <li>Q92. A database language concerned with the definition of the whole database a structure and schema is:</li> <li>(a) DDL</li> <li>(b) DML</li> <li>(c) DCM</li> <li>(d) All of the above</li> </ul>
Q93. Which of the following is not a type of Microsoft access database object?  (a) Table (b) Form (c) Worksheet (d) Modules
<b>Q94.</b> What is the maximum length a text field can be ? (a) 75 (b) 64 (c) 254 D) 255
Q95. Which field type is used to store pictures in a table?  (a) Memo (b) OLE (c) Hyperlink (d) None of the above
Q96. A query prompts a user for a data and then displays only records that contain the specified data. Which type of query is this ?  (a) A parameter query  (b) A crosstab query  (c) An update query  (d) An action query
<ul> <li>Q97. A query summarizes information in a grid organized by regions and months. Which type of query is this?</li> <li>(a) An update query</li> <li>(b) A parameter query</li> <li>(c) An action query</li> <li>(d) A crosstab query</li> </ul>
Q98. In MS Access press Ctrl + 0 to: (a) Open a new database (b) Open an existing database (c) Exit MS access (d) None of these
<ul><li>Q99. In Ms Access LOOKUP WIZARD is used to:</li><li>(a) To select from previous values</li><li>(b) To select values from excel Sheets</li><li>(c) To select values from another table</li><li>(d) Not a valid data type</li></ul>

Q100. In MS access auto number data type:

- (a) Can be sequential
- (b) Can be random
- (c) Can be edited
- (d) Only (A) and (B)

## **Solutions**

## Paper - I **Language Test (English)**

## **S1. Ans.(A)** Correct form of the verb.

- (i) I will come as soon as I <u>receive</u> your letter.
- (ii) I have waited for two hours. I won't wait any longer.
- (iii) The examination begins tomorrow.
- (iv) We arrived at the station before the train left.
- (v) Do any of these children know English?
- (vi) He must not be over forty.
- (B) Correct the error.
- (i) He lacks courage
- (ii) Will you be present at the meeting tomorrow.
- (iii) The Ganga has risen in the Himalayas.
- (iv) Take an umbrella in case it rains.
- (v) He resembles my father.
- (vi) We reached school early.
- (vii) We blamed ourselves for the accident.
- (viii) The one who talks much does little.
- (ix) What is that animal The sentence is correct
- (x) All the plants in my garden have flowers.
- (xi) As I was ill, I could not attend school.
- (xii) He is becoming strong every day The sentence is correct
- (xiii) It is a pleasure to get such a nice gift.
- (C) Change the voice.
- (i) The patient was exmined by the doctor.
- (ii) The newspaper is being read by him.
- (iii) Let the door be shut.
- (iv) Two books have been bought by him.
- (D) Change into indirect speech.
- (i) David said that he was writing a letter then.
- (ii) Sambit said that he would work hard to get first class.
- (iii) The teacher told the boys not to talk in the class.
- (iv) Anand asked bibek to bring him a cup of tea.

#### **S2. Ans.()**

- (a) You would treat a borrowed book with a certain considerate formality. You must ensure that it sustains no damage, You must not mark it, turn down the pages or leave it carelessly. There is also an expectation to return the borrowed book, though its acknowledged that this is seldom done.
- (b) The advantage of marking favourite passages in book is that it enables you to remember more easily the significant sayings. By underlining or nothing down certain parts of the book, you can refer back to those passages and revisit the ideas or quotes that resonated with you.
- (c) A bookshelf in a private library should not have doors, glass windows, or keys. It should be free and accessible to the hand as well as the eye. The emphasis is on having a collection of books that you can easily interact with and use for reading.
- (d) Book friends are better than living friends in the sence that you can enjoy the most truly aristocratic society in the world whenever you want. While living friends and acquaintances may not always be available or accessible, in a private library, you can have conversations with great authors like Socrates, Shakespeare, Dickens, or Shaw through their books. These authors wrote for you, and you can look into their hearts and understand their ideas whenever you open their books.
- (e) Authors are different from actors in the way connect with the audience. Actors perform in front of a live audience, and the interaction is limited to the time of the performance. On the other hand, authors write for their audience, and their words remain in the books indefinitely. You can engage with the thoughts, emotions, and ideas of authors whenever you read their works, unlike actors who are physically present only during a performance.

## Language Test (Odia)

#### 9.

- (କ) ଖେଳଣାଟି କି ସ୍ୱନ୍ଦର !
- (ଖ) ଲାଞ୍ଚ ଖାଉଥିବା ବ୍ୟକ୍ତି ଦିନେ ନା ଦିନେ ଧରାପତେ ।
- (ଗ) ନୀଳିମା ନୀଳ

ପିଇବା - ପିଇଥିବା

(ଘ) ସଂସ୍କାର - ସମ୍ + କାର (ବ୍ୟଞ୍ଜନ ସନ୍ଧି)

ମୃଣ୍ମୟ - ମୃତ୍ + ମୟ (ବ୍ୟଞ୍ଜାନ ସନ୍ଧି)

(ଙ) ଜାୟା ଓ ପତି - ଦମ୍ପତି

ପଥମାନଙ୍କର ରାଜା - ରାଜପଥ

(ଚ) କୀର୍ତ୍ତି - ଅକୀର୍ତ୍ତି

ସାମ୍ୟ - ଅସାମ୍ୟ

(ଛ) ସ୍ୱର୍ଯ୍ୟପରାଗ - ସ୍ୱର୍ଯ୍ୟୋପରାଗ

ସୌଳନ୍ୟତା - ସୌଳନ୍ୟ

ଦ୍ରାବସ୍ଥା - ଦ୍ରବସ୍ଥା

(ଜ) ଚିତା କାଟିବା (ଠକିବା) - ଆଜିକାଲି ଧର୍ମ ନାମରେ ବହୁ ଅସାଧୁ ବ୍ୟକ୍ତି ଲୋକମାନଙ୍କୁ ଚିତା କାଟୁଛନ୍ତି |

ଘର ଢ଼ିଙ୍କି କୁୟୀର (ନିଜ ଲୋକ ଶତ୍ର) - ମୁଁ କାହାକୁ କହିବି, ମୋ ପୁଅ ତ ଘର ଢ଼ିଙ୍କି କୁୟୀର ସାଜିଛି |

- (ଝ) କୃପଶର ଭାବ କାର୍ପଶ୍ୟ ଗୁଣ ଅର୍ଥରେ 'ୟ' ପ୍ରତ୍ୟୟ ନିଶା ଅଭ୍ୟାସ ଯାହାର - ନିଶାଖୋର - ଅଭ୍ୟାସ ଅର୍ଥରେ 'ଖୋର' ପ୍ରତ୍ୟୟ
- (ଞ) କି ସନ୍ଦର ଏ ଚିଲିକା ! ରାଧାନାଥ ଯଥାର୍ଥରେ କହିଛନ୍ତି "ଉତ୍କଳ କମଳା ବିଳାସ ଦୀର୍ଘିକା "

୪. ନାନୋ-ଟେକ୍ନୋଲୋଜିର ଏହି ଦିନରେ ଅନେକ ଲୋକ ଅଛନ୍ତି ଯେଉଁମାନେ ପଚାରନ୍ତି: ସାହିତ୍ୟରେ ସମୟ ନଷ୍ଟ କାହିଁକି? ଏହା ଆମକୁ ବାହ୍ୟ ସ୍ଥାନ ଜିତିବାରେ ସାହାଯ୍ୟ କରିବ କି , ଏହା ଆମକୁ ଅଧିକ ସୁନା, ଉନ୍ନତ ଶିଳ୍ପ କିମ୍ବା ସୁପର କମ୍ପ୍ୟୁଟର ଉତ୍ପାଦନରେ ସାହାଯ୍ୟ କରିବ କି? ଏହିପରି ସମୟ ପ୍ରଶ୍ମ ପଛରେ ଶିକ୍ଷାର ଉଦ୍ଦେଶ୍ୟ ଏବଂ ମୂଲ୍ୟର ମାନ ବିଷୟରେ ଭୁଲ ଧାରଣା ଅଛି | ଶିକ୍ଷାର ମୂଳ ଉଦ୍ଦେଶ୍ୟ ଉପଯୋଗୀ ନୁହେଁ | ଶିକ୍ଷାର ମୂଖ୍ୟ କାର୍ଯ୍ୟ ହେଉଛି ଚାକିରି ପାଇଁ ତାଲିମ ଦେବା ନୁହେଁ, ବରଂ ସନ୍ତୁଳିତ ନାଗରିକ ଉତ୍ପାଦନ କରିବା, ମାନବ ଷଞ୍ଜ ନୁହେଁ, ଉନ୍ନତ ତଥା ବୁଦ୍ଧିମାନ ଏବଂ ସୁଖୀ ନାଗରିକ କରିବା | ସର୍ବଶ୍ରେଷ ଲେଖକମାନେ ଏହି ସର୍ବଭାରତୀୟ ସମସ୍ୟାଗୁଡ଼ିକ ପାଇଁ ନିରନ୍ତର ଚିନ୍ତିତ | ମହାନ ସାହିତ୍ୟ ପଢିବା ନିଜେ ମୂଲ୍ୟବାନ ଏବଂ କୌଣସି କ୍ଷମା ପ୍ରାର୍ଥନା କିମ୍ବା ବ୍ୟାଖ୍ୟା ଆବଶ୍ୟକ କରେ ନାହିଁ ଯେ ଏହା ଆନନ୍ଦଦାୟକ, ସେହି ସମୟରେ ଶିକ୍ଷଣୀୟ |

#### 8.

- (କ) ଜନତାର ଦୁର୍ବଳତା ହେଉଛି କିଛି ଗୋଟିଏ କାରଣକୁ ଆଶାକରି ପ୍ର<mark>ଳୟ-ବିଳାସ</mark>ରେ ମାତିଯିବା |
- (ଖ) ପଞ୍ଚଗ୍ରହକ୍ଟ କୁ ଏଠାରେ ନାଟକ କୁହାଯାଇଛି |
- (ଗ) ମାଳିକା ଏବଂ ଭୀମଭୋଇଙ୍କ କଥାକୁ ଆମେ ମିଛବୋଲି କ<mark>ହୁନା ।</mark>
- (ଘ) ପଞ୍ଚଗ୍ରହକୃଟ, ବାରହାତ ଖଣ୍ଡା ବିଶ୍ୱାସଟି ଅହେତୁକ ବିଶ୍ୱାସ |
- (ଙ) ଲୋକଙ୍କ ଭିତରେ ବେଳେବେଳେ ଖେଳିଯାଉଥିବା ପ୍ର<mark>ଳୟ ଆତଙ୍କର ମନୋବୈଜ୍ଞାନିକ</mark> କାରଣ ବିଶ୍ଲେସଣ କରିବାକୁ ଏଠାରେ ଜଟିଳ ବିଷୟ ବୋଲି କ୍ରହାଯାଇଛି ।

## Paper - II

## S1. Ans.(a) Lord Louis Mountbatten

**Sol.** Lord Louis Mountbatten was the first Governor-General of Independent India from August 15, 1947, until June 21, 1948. After that, the office of Governor-General was replaced by the President of India, and Dr. Rajendra Prasad became the first President of India.

## S2. Ans.(a) Maithripala Sirisena

**Sol.** As of 2023, Ranil Wickremesinghe is the President of Srilanka.

## S3. Ans.(c) Pali

## S4. Ans.(a) Hieun Tsang

**Sol.** Hieun Tsang, also known as Xuanzang, was a Chinese Buddhist monk and traveler who visited Nalanda University during the reign of King Harsha in the 7th century CE. He is famous for his extensive travels and documentation of his journey, which provides valuable information about ancient India and its culture.

## S5. Ans.(c) Dadabhai Naoroji

**Sol.** The theory of economic drain of India during British imperialism was propounded by Dadabhai Naoroji. He was a prominent Indian nationalist, scholar, and political leader who is often referred to as the "Grand Old Man of India." Naoroji's work on the economic exploitation of India by British rule played a significant role in shaping the Indian nationalist movement during the colonial era. He presented his economic drain theory in his book "Poverty and Un-British Rule in India," published in 1901.

#### **S6. Ans.(a)** A.O. Hume

**Sol.** The founder of the All India National Congress, which later became the Indian National Congress (INC), was Allan Octavian Hume (A.O. Hume). He was a retired British civil servant and ornithologist who played a crucial role in the formation of the Indian National Congress in 1885. The INC became a significant political organization in the Indian freedom struggle against British colonial rule.

#### **S7. Ans.(a)** NITI Aayog

**Sol.** The Prime Minister of India is the Chairman of NITI Aayog (National Institution for Transforming India), which is a policy think tank of the Government of India. It replaced the Planning Commission in 2015 and serves as a platform for cooperative federalism and evidence-based policy-making in India.

### S8. Ans.(d) Assam

**Sol.** Assam is the state of India that records the highest production of tea. Assam is known for its high-quality tea, and it is one of the major tea-producing regions in the country.

#### **S9. Ans.(a)** Arunachal Pradesh

**Sol.** Arunachal Pradesh is not a Union Territory. It is one of the states in India, located in the northeastern part of the country. The correct answer to the question is (A) Arunachal Pradesh.

#### **S10.** Ans.(b) Sri Lanka

**Sol.** The SAARC (South Asian Association for Regional Cooperation) Summit in 2014 was hosted by Sri Lanka. It took place in the capital city, Colombo.

**S11.** Ans.(a) China is not a member of ASEAN (Association of Southeast Asian Nations).

## **S12.** Ans.(b) Tony Abbott

### **S13.** Ans.(d)

**Sol.** Sitara Devi was a renowned dancer and an exponent of Kathak, which is a classical dance form originating from Northern India. She was one of the leading Kathak dancers and contributed significantly to promoting and popularizing this art form.

### S14. Ans.(a)

Sol. The autobiography of Sachin Tendulkar is titled "Playing It My Way."

#### **S15.** Ans.(b)

**Sol.** "Train to Pakistan" was written by Khushwant Singh. It is a historical novel set during the Partition of India in 1947, depicting the tragic events and human suffering that occurred during that period.

#### **S16. Ans.(c)** Queen

**Sol.** Kangana Ranaut received the National Award for Best Actress for the film "Queen". The movie was released in 2014 and garnered critical acclaim for her outstanding performance as the lead character, Rani Mehra.

#### **S17.** Ans.(a)

**Sol.** Penicillin was discovered by Alexander Fleming in 1928. He accidentally observed the growth of mold (Penicillium) that had antimicrobial properties and found that it was effective against certain bacteria. This accidental discovery led to the development of one of the first antibiotics, revolutionizing the field of medicine.

#### S18. Ans.(a)

Sol. South Korea

### S19. Ans.(c)

**Sol.** Wheeler Island, also known as Abdul Kalam Island, is famous for the launching of missiles. It is an island off the coast of Odisha, India, and serves as a missile testing range for the Indian defense forces.

#### **S20. Ans.(a)** Norway is known as the Land of the Midnight Sun.

**Sol.** It is a phenomenon that occurs in the summer months, particularly in the northern regions of Norway, where the sun remains visible for a continuous period, even at midnight. This is due to the tilt of the Earth's axis, which results in continuous daylight during the summer in high-latitude regions.

#### **S21. Ans.(b)** Telangana was created as the 29th state of India.

**Sol.** It was officially formed on June 2, 2014, after it was carved out from the state of Andhra Pradesh. Hyderabad is the joint capital of both Telangana and Andhra Pradesh for a period of time, and later, it became the sole capital of Telangana.

### **S22. Ans.(b)** India does not enjoy veto power in the UN Security Council.

**Sol.** The countries with veto power are the five permanent members of the UN Security Council: China, France, Russia, the United Kingdom, and the United States. These five countries have the ability to veto any substantive resolution, regardless of the level of international support it may have, which gives them significant influence in the decision-making process of the Security Council.

#### **S23. Ans.(a)** International Human Rights Day is celebrated on 10th December every year.

**Sol.** It commemorates the day when the United Nations General Assembly adopted the Universal Declaration of Human Rights in 1948. This declaration serves as a milestone document in the history of human rights, articulating the fundamental rights and freedoms to which all individuals are entitled, regardless of their race, color, religion, sex, language, political or other opinion, national or social origin, property, birth, or other status.

#### **S24. Ans.(a)** W. Rontgen is associated with the discovery of X-ray.

**Sol.** Wilhelm Röntgen, a German physicist, discovered X-rays in 1895. His discovery revolutionized medicine and allowed for non-invasive visualization of the internal structures of the human body. X-rays have since become an essential tool in medical diagnosis and various other fields.

### **S25. Ans.(b)** Mahatma Gandhi has authored the book 'Hind Swaraj'.

**Sol.** It was written in 1909 and is considered one of his seminal works. In the book, Gandhi discusses his ideas on swaraj (self-rule), non-violence, passive resistance, and his vision for India's independence from British colonial rule.

#### **S26.** Ans.(b)

**Sol.** Kandla Port is situated in the state of Gujarat, India. It is one of the major seaports in India and plays a significant role in the country's trade and commerce.

#### **S27.** Ans.(b)

**Sol.** The headquarters of the International Court of Justice (ICJ) is located in The Hague, Netherlands. The ICJ is the principal judicial organ of the United Nations and settles legal disputes between member states in accordance with international law.

## **S28.** Ans.(b)

**Sol.** The first modern regular census in India was started in 1881 by Lord Lytton, who was the Viceroy of India at that time. The census was conducted to gather comprehensive demographic data of the country's population and to assess the economic and social conditions prevailing in British India.

**S29. Ans.(a)** Carbon dioxide and Methane are the gases most responsible for global warming.

**Sol.** These two greenhouse gases are major contributors to the greenhouse effect, which traps heat in the Earth's atmosphere and leads to the warming of the planet. Human activities, such as burning fossil fuels and deforestation, have significantly increased the concentrations of these gases in the atmosphere, resulting in the phenomenon of global warming and climate change.

#### S30. Ans.(c)

**Sol.** Irani Trophy is associated with Cricket. It is an annual first-class cricket tournament in India played between the Rest of India team and the Ranji Trophy champions. The tournament is named after Z.R. Irani, who was associated with the Board of Control for Cricket in India (BCCI).

**S31. Ans.(d)** Kalhana's work 'Rajatarangini' is an important source material for the study of Early Medieval Kashmir.

**Sol.** It is a historical chronicle that provides valuable information about the rulers, events, and society of Kashmir from ancient times to the 12th century CE. The work is considered a significant literary and historical contribution to the understanding of Kashmir's past.

#### S32. Ans.(a)

**Sol.** The author of the book "The God of Small Things" is Arundhati Roy. The novel, published in 1997, won the Man Booker Prize in the same year and brought international acclaim to Arundhati Roy for her captivating storytelling and vivid portrayal of characters and their lives in Kerala, India.

**S33. Ans.(b)** "An Inconvenient Truth" is a film directed by Al Gore to promote public awareness about Global Warming.

**Sol.** The documentary, released in 2006, focuses on the urgent issue of climate change and its potential impacts on the planet. Al Gore, the former Vice President of the United States, presents scientific evidence and data to highlight the consequences of global warming and advocate for actions to address the environmental crisis.

**S34. Ans.** The father of Immunology is (C) Landsteiner.

**Sol.** His full name was Karl Landsteiner, and he was an Austrian immunologist and pathologist. He is best known for his groundbreaking work on the blood groups, for which he was awarded the Nobel Prize in Physiology or Medicine in 1930. Landsteiner's discoveries paved the way for the understanding of blood compatibility and the development of blood transfusion techniques, significantly contributing to the field of immunology.

**S35.** Ans.(c) Natural Gas is considered the cleanest fossil fuel among the options given.

**Sol.** While it is still a fossil fuel and emits greenhouse gases when burned, natural gas produces fewer carbon dioxide (CO2) emissions compared to coal, petrol (gasoline), and diesel. It is also relatively cleaner in terms of particulate matter and sulfur dioxide emissions, making it a preferred option for some applications over other fossil fuels.

### \$36. Ans.(a)

**Sol.** Meghnad Saha is known for his contributions in the field of Physics. He was an Indian astrophysicist and mathematician who made significant advancements in the field of astrophysics and spectroscopy.

## \$37. Ans.(a)

**Sol.** The Ozone Layer of the Earth's atmosphere is important for living organisms because it prevents the entry of harmful ultraviolet (UV) rays from the Sun. The ozone layer absorbs a significant amount of UV radiation, particularly the most harmful UV-B and UV-C rays.

### **S38. Ans.(b)** Hygrometer is an instrument that measures the level of humidity in the air.

**Sol.** It is used to determine the amount of moisture present in the atmosphere by measuring the relative humidity, which is the ratio of the amount of water vapor in the air to the maximum amount of water vapor the air can hold at a specific temperature.

#### \$39. Ans.(d)

**Sol.** Richard Rahul Verma. First U.S. Ambassador to India of Indian origin.

### **S40. Ans.(a)** The Dynamo was invented by Michael Faraday.

**Sol.** He was an English scientist who made significant contributions to the fields of electromagnetism and electrochemistry. Faraday's work on electromagnetic induction and the development of the first electromagnetic generator, known as the Faraday disc or Faraday Dynamo, laid the foundation for modern electrical power generation and utilization.

#### **S41.** Ans.(c)

**Sol.** Bachpan Bachao Andolan (BBA) is a movement in India dedicated to protecting the rights of children, particularly those involved in child labor and trafficking.

#### S42. Ans.(a)

**Sol.** Boko Haram is an organization closely associated with the statement "It is an organization opposed to Western education in Nigeria." The name "Boko Haram" loosely translates to "Western education is forbidden" in the Hausa language.

#### S43. Ans.(d)

**Sol.** The headquarters of UNESCO (United Nations Educational, Scientific and Cultural Organization) is located in Paris, France. It was established on November 16, 1945, and serves as a specialized agency of the United Nations with a focus on promoting international cooperation in education, science, culture, and communication.

### S44. Ans.(b)

**Sol.** The Great Barrier Reef is located in Australia. It is one of the most iconic and largest coral reef systems in the world, stretching over 2,300 kilometers along the northeast coast of Australia in the Coral Sea.

#### S45. Ans.(b)

**Sol.** Europe is the continent of the world that does not have a desert. While Europe has a diverse range of climates and landscapes, including mountains, plains, and forests, it does not have any true deserts.

#### \$46. Ans.(a)

Sol. A.B. Vajpayee

### **S47.** Ans.(d)

Sol. Smriti Irani

#### S48. Ans.(b)

**Sol.** Karl Marx is the author of the famous book "Das Kapital." The full title of the book is "Das Kapital: Kritik der politischen Ökonomie" (Capital: Critique of Political Economy).

## S49. Ans.(a)

**Sol.** Loktak Lake is situated in the state of Manipur, India. It is the largest freshwater lake in Northeast India and is known for its floating phumdis (masses of vegetation and organic matter).

#### **S50.** Ans.(b)

**Sol.** Cloudy nights are warmer compared to clear nights because clouds reflect back the heat given off by the Earth. The clouds act as a barrier to outgoing radiation, preventing the heat from escaping into space.

#### **S51. Ans.(d)** Nitrous oxide and Sulphur dioxide

**Sol.** Acid rain is caused by the pollution of the environment by certain pollutants, primarily sulfur dioxide (SO2) and nitrogen oxides (NOx), which are released into the atmosphere from industrial processes, vehicle emissions, and other human activities. These pollutants react with water, oxygen, and other chemicals in the atmosphere to form sulfuric acid and nitric acid, which then fall to the ground as acid rain.

#### S52.Ans.(a) Alfred Nobel

**Sol.** Dynamite was invented by Alfred Nobel, the Swedish chemist and engineer, in 1867. He was a prolific inventor and also the founder of the Nobel Prizes, which were established in his will. Dynamite revolutionized various industries and was widely used in construction, mining, and demolition activities.

## S53. Ans.(d) Secretary-General of UN

**Sol**. Ban Ki-moon is known as the Secretary-General of the United Nations (UN). He served as the eighth Secretary-General from January 1, 2007, to December 31, 2016. During his tenure, he worked on various global issues, including climate change, sustainable development, and conflict resolution. Prior to his role as Secretary-General, Ban Ki-moon also served as the Foreign Minister of South Korea.

### \$54. Ans.(a)

Sol. Ottawa

**Sol.** The capital of Canada is Ottawa. It is the political and administrative center of the country and is located in the province of Ontario.

## **S55. Ans.(b)** Foreign Direct Investment

**Sol.** FDI stands for Foreign Direct Investment. It refers to the investment made by individuals, businesses, or governments from one country into businesses or assets located in another country. This investment involves a long-term interest and a significant degree of influence or control by the investor over the foreign business. FDI plays a crucial role in the economic development and globalization of countries.

#### **S56. Ans.(b)** Deadly Virus

**Sol.** Ebola is a deadly virus that causes a severe and often fatal illness called Ebola virus disease (EVD) or simply Ebola. The virus is transmitted to humans from wild animals and then spreads through human-to-human transmission via direct contact with the blood, secretions, organs, or other bodily fluids of infected people, as well as surfaces and materials contaminated with these fluids.

The Ebola virus has caused several outbreaks in different parts of Africa, with symptoms ranging from fever, headache, muscle pain, and weakness to severe diarrhea, vomiting, and hemorrhaging. EVD is a highly infectious and dangerous disease, with a high fatality rate in some outbreaks. Efforts to control and contain Ebola outbreaks have involved various public health measures and the development of vaccines and treatments.

#### S57. Ans.(a) Geneva

**Sol.** The Headquarters of the World Health Organization (WHO) is located in Geneva, Switzerland. Geneva serves as an international hub for various United Nations agencies and other international organizations, and WHO is one of the key organizations headquartered in the city. WHO is responsible for coordinating international public health efforts and providing leadership on global health issues.

#### **S58. Ans(B)** Pakistan

**Sol.** The Indus Waters Treaty is a water-sharing agreement between India and Pakistan. It was signed in 1960, with the help of the World Bank as a mediator, to regulate the use of the Indus River and its tributaries. The treaty divided the six main rivers of the Indus Basin into two sets of three rivers each, with the eastern rivers (Ravi, Beas, and Sutlej) allocated to India, and the western rivers (Indus, Jhelum, and Chenab) allocated to Pakistan.

The treaty has been considered one of the most successful water-sharing agreements between two countries and has survived multiple conflicts and tensions between India and Pakistan. It outlines the rights and obligations of both countries regarding the usage and management of the shared river waters.

### S59. Ans.(d) Manoj Das

**Sol.** Manoj Das is not a recipient of the Jnanpith Award. The Jnanpith Award is a prestigious literary award in India, presented annually to an author for their outstanding contribution to literature. Among the options provided, Sitakanta Mahapatra, Gopinath Mohanty, and Prativa Ray are all notable Indian writers who have been honored with the Jnanpith Award for their significant literary contributions. However, Manoj Das is not a recipient of this award.

#### S60. Ans.(a) Sriharikota

**Sol.** Mangalyaan, also known as the Mars Orbiter Mission (MOM), was launched from Sriharikota, India. Sriharikota is a barrier island located in the state of Andhra Pradesh, and it serves as the primary launch site of the Indian Space Research Organisation (ISRO). The Mars Orbiter Mission was launched on November 5, 2013, with the objective of exploring Mars and studying its surface, morphology, and mineralogy. It made India the first Asian nation to reach Martian orbit and the fourth space agency in the world to do so, after NASA, the Soviet space program, and the European Space Agency.

## **S81. Ans.(d)** Chadwick

**Sol.** The neutron was discovered by James Chadwick, an English physicist, in 1932. He conducted experiments that provided strong evidence for the existence of the neutron, which is a subatomic particle found in the nucleus of atoms, alongside protons. Chadwick's discovery of the neutron was a significant contribution to our understanding of atomic structure and led to further advancements in nuclear physics.

#### **S82.** Ans.(a) India and Pakistan

**Sol.** The recipients of the Nobel Peace Prize for the year 2014 were Kailash Satyarthi from India and Malala Yousafzai from Pakistan. They were awarded the prize for their struggle against the suppression of children and young people and for the right of all children to education. Kailash Satyarthi is an Indian child

rights activist, and Malala Yousafzai is an advocate for girls' education in Pakistan. Their efforts to promote education and advocate for children's rights earned them international recognition and the prestigious Nobel Peace Prize.

#### S83. Ans.(d) Aryabhatta

**Sol.** The concept of decimal place value is attributed to the Indian mathematician Aryabhata, who lived in the 5th century CE. Aryabhata was one of the earliest mathematicians in ancient India and is considered a pioneer in the field of mathematics. He introduced the decimal system and place value notation in his work "Aryabhatiya," where he used a place value system with the base of 10. This system laid the foundation for modern decimal arithmetic and revolutionized mathematics and numerical representation.

### S84. Ans.(c) Kerala

**Sol.** Kerala is the largest rubber producing state in India. Rubber cultivation is an important agricultural activity in Kerala, and the state contributes significantly to India's overall rubber production. The climate and soil conditions in Kerala are favorable for rubber cultivation, and it is one of the main cash crops in the region. Other states like Tamil Nadu, Karnataka, and Maharashtra also produce rubber, but Kerala leads in terms of production.

### S85. Ans.(b) Jaipur

**Sol.** Jaipur is known as the "Pink City" of India. It is the capital city of the Indian state of Rajasthan. The city earned this nickname due to the predominant color of its buildings, which were painted pink in 1876 to welcome the visit of the Prince of Wales (later King Edward VII). The pink color symbolized hospitality and was chosen to create a grand impression for the royal visit. Even today, many of the buildings in Jaipur's old city area maintain the pink hue, making it a unique and visually appealing destination for tourists and visitors.

### S86. Ans.(b) Center-State Relations

**Sol.** The Sarkaria Commission Report deals with Center-State Relations in India. It is officially known as "Report of the Commission on Centre-State Relations," and it was a commission set up by the Indian government in 1983. The commission was headed by Justice Ranjit Singh Sarkaria, and its primary objective was to examine and make recommendations on various aspects of the relationship between the central government and the state governments in India. The report addressed issues related to the distribution of powers and responsibilities between the Union and the states, the role of the Governor, financial relations, and other important matters concerning the federal structure of India's governance.

### **S87. Ans.(d)** Dignity of Man as a human being.

**Sol.** The concept of Human Rights primarily emphasizes the dignity and inherent value of every human being. Human rights are a set of fundamental rights and freedoms that are inherent to all individuals, regardless of their nationality, race, gender, religion, or any other status. These rights are considered universal, inalienable, and indivisible.

While various human rights encompass a wide range of aspects, including the right to property, right to equality, right to religion, and many others, the underlying principle is the recognition and protection of the inherent dignity and worth of all human beings. This principle serves as the foundation for the modern concept of human rights, enshrined in international human rights instruments and laws worldwide.

#### **S88. Ans.(b)** 33%

**Sol.** The minimum land area recommended for forest cover to maintain proper ecological balance in India is 33%. This target is set by the Indian government and various environmental agencies to ensure a sustainable environment, biodiversity conservation, and ecological balance. The forest cover is essential for maintaining soil health, regulating the water cycle, supporting wildlife habitats, and mitigating the impacts of climate change. Efforts are made to increase the forest cover in the country to achieve the recommended target and promote environmental sustainability.

#### **S89.** Ans.(b)

Sol. H.L. Dattu.

#### S90. Ans.(a) Kerala

**Sol.** The 35th National Games of India were held in Thiruvananthapuram-Kerala. The games took place from January 31 to February 14, 2015. Various cities across Kerala hosted the events, and it was a major multi-sport event where athletes from different states and union territories competed in various sports disciplines. The National Games are organized by the Indian Olympic Association and are held once every two years to promote sports and encourage talented athletes from across the country.

#### S91. Ans.(a) Mumbai

**Sol.** Bhabha Atomic Research Centre (BARC) is located in Mumbai, Maharashtra, India. It is India's premier nuclear research facility and plays a vital role in various aspects of nuclear science and technology. BARC is involved in nuclear power generation, research and development in nuclear science and engineering, nuclear fuel cycle facilities, and nuclear applications in medicine, agriculture, and industry.

#### **S92. Ans.(d)** 1757

**Sol.** The Battle of Plassey was fought in the year 1757. It took place in the town of Plassey (now Palashi) in Bengal, India. The battle was a significant event in Indian history and marked a turning point in the British East India Company's control over India. The British victory in the Battle of Plassey paved the way for British dominance in India, leading to the establishment of British colonial rule over the Indian subcontinent. Robert Clive, an officer of the British East India Company, played a crucial role in the British victory at Plassey.

### S93. Ans.(a) New York

**Sol.** The Statue of Liberty is situated in New York City, United States. It is located on Liberty Island in New York Harbor. The statue was a gift from France to the United States and was dedicated on October 28, 1886, as a symbol of freedom and democracy. It has become one of the most recognizable landmarks in the world and is a symbol of hope and liberty for millions of immigrants who entered the United States through nearby Ellis Island.

#### **S94. Ans.(a)** The Brundtland Commission Report

**Sol.** The term "Sustainable development" has been derived from the report of the World Commission on Environment and Development, also known as the Brundtland Commission. The commission, chaired by former Norwegian Prime Minister Gro Harlem Brundtland, released its landmark report titled "Our Common Future" in 1987. The report introduced and defined the concept of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." It emphasized the importance of balancing economic, social, and environmental considerations to ensure a sustainable and equitable future for humanity. The report played a crucial role in shaping the global discourse on sustainability and paved the way for international efforts to promote sustainable development.

### **S95. Ans.(b)** 1974

**Sol.** India exploded its first nuclear device, code-named "Smiling Buddha," on May 18, 1974, at the Pokhran Test Range in the Thar Desert of Rajasthan. This nuclear test made India the sixth nation in the world to possess nuclear weapons capability. The test was a significant milestone in India's nuclear program and had far-reaching implications for regional and global security dynamics.

#### **S96.** Ans.(d) Dr. Nasim Zaidi

**Sol.** In 2015, the Chief Election Commissioner of India was Dr. Nasim Zaidi. He served as the 20th Chief Election Commissioner from April 19, 2015, to July 5, 2017. Before becoming the Chief Election Commissioner, he was an Indian Administrative Service (IAS) officer from the 1976 batch.

#### S97. Ans.(b) Tamil Nadu

**Sol.** The Kudankulam Nuclear Power Plant is located in the state of Tamil Nadu, India. It is situated in Kudankulam, which is a coastal town in the Tirunelveli district of Tamil Nadu. The Kudankulam Nuclear Power Plant is one of India's nuclear power facilities and is jointly constructed by India and Russia. It has been a significant project in the country's efforts to increase its nuclear power generation capacity.

#### **S98. Ans.(a)** Badminton

**Sol.** Saina Nehwal is associated with the sport of Badminton. She is a renowned Indian badminton player and has achieved numerous accolades and victories in her career. Saina Nehwal is considered one of the most successful and influential badminton players in India and has represented the country in various international tournaments, including the Olympics and the World Championships. She has won multiple medals at the Commonwealth Games and has been a significant force in popularizing badminton in India.

#### **S99.** Ans.(a) 28th February

**Sol.** National Science Day is observed in India on 28th February every year. The day is dedicated to commemorating the discovery of the Raman effect by Indian physicist Sir C.V. Raman on 28th February 1928. The Raman effect is a phenomenon of inelastic scattering of light by molecules, which led to the award of the Nobel Prize in Physics to Sir C.V. Raman in 1930. National Science Day is celebrated to promote scientific temper and awareness about the importance of science and its application in our daily lives. It also encourages scientific research and innovation among students and the general public.

#### **S100.** Ans.(b) Yen

**Sol.** The currency of Japan is the Japanese Yen, represented by the symbol "\times". The Yen is the official currency of Japan and is used for all transactions within the country. It is also one of the major currencies in the international foreign exchange market.

Paper - III

**S1. Ans.(b)** .06

**Sol.** Cube root of 0.000216 = 0.06

S2. Ans.(a) 100

**Sol.**  $0.0169 \times 100 = (1.3)^2$ 

**S3. Ans.(c)** 47.72

Sol. 
$$\sqrt{1 + \frac{x}{144}} = \frac{15}{13}$$
  
 $\Rightarrow 1 + \frac{x}{144} = \frac{225}{169}$   
 $\Rightarrow \frac{x}{144} = \frac{56}{169}$   
 $\Rightarrow x = 47.72$ 

**S4.** Ans.(b)  $8\sqrt{3}$ 

Sol. 
$$x^2 - y^2 = (x + y)(x - y)$$
  

$$= \left(\frac{\sqrt{3}+1}{\sqrt{3}-1} + \frac{\sqrt{3}-1}{\sqrt{3}+1}\right) \left(\frac{\sqrt{3}+1}{\sqrt{3}-1} - \frac{\sqrt{3}-1}{\sqrt{3}+1}\right)$$

$$= \left(\frac{(\sqrt{3}+1)^2 + (\sqrt{3}-1)^2}{(\sqrt{3})^2 - (1)^2}\right) \left(\frac{(\sqrt{3}+1)^2 - (\sqrt{3}-1)^2}{(\sqrt{3})^2 - (1)^2}\right)$$

$$= \left(\frac{3+1+2\sqrt{3}+3+1-2\sqrt{3}}{3-1}\right) \left(\frac{3+1+2\sqrt{3}-3-1+2\sqrt{3}}{3-1}\right)$$

$$= \frac{8}{2} \times \frac{4\sqrt{3}}{2} = 8\sqrt{3}$$

**S5. Ans.(d)** 700 apples

**Sol.** A fruit seller sells 40% apples and still 420 apples

$$1\% = 420/60$$

$$100\% = \frac{420}{60} \times 100 = 700 \text{ apples}$$

**S6.** Ans.(a) ₹ 6876.10

Sales 
$$tax = 10\%$$

Amount to pay for goods = 
$$6650 \times \frac{94}{100} \times \frac{110}{100} = 6876.10$$

**S7.Ans.(b)** 20%

So if 
$$B = 100\%$$
 then  $A = 125\%$ 

Less b earn than A = 
$$\frac{25}{125} \times 100 = 20\%$$

**S8. Ans.(b)** 5%

**Sol.** The average population of the town per year 
$$=$$
  $\frac{262600-175000}{10} = 8760$ 

% increase per year = 
$$\frac{8760}{17500} \times 100 = 5\%$$

S9. Ans.(a) 6.2

In 
$$1^{st}$$
 10 over run rate = 3.2

Toatal run in 1<sup>st</sup> 10 over = 
$$10 \times 3.2 = 32$$

In remaining 40 over, total target run = 
$$280$$

So run rate in the remaining 40 overs = 
$$\frac{280-32}{40}$$
 = 6.2

### **S10. Ans.(a)** 48.55

**Sol.** Avg.weight of 16 boys = 50.25 kg

Avg. weight of remaining 8 boys = 45.15 kg

Avg . weight of all the boys = 
$$\frac{50.25 \times 16 + 45.15 \times 8}{16 + 8} = 48.55$$

### S11. Ans.(c) 200

**Sol.** Avg , of 100 numbers = 44

Avg. of 
$$(100+4=104)$$
 numbers = 50

Avg . of 4 new numbers = 
$$\frac{50 \times 104 - 44 \times 100}{4} = 200$$

### **S12**. Ans.(b) 22

**Sol.** A+B = 
$$20 \times 2 = 40$$

$$B+C = 19 \times 2 = 38 - (1)$$

$$A+C = 21 \times 2 = 42$$

A+B+C = 
$$\frac{40+38+42}{2}$$
 = 60 -----(2)

Subtract from eqution 2 in equation 1 = 60 - 38 = 22

### **S13.** Ans.(b) ₹ 180

$$P = 500 t = 3/2 yr r = 24\%$$

$$S.I = \frac{500 \times \frac{3}{2} \times 24}{100} = Rs. 180$$

# **S14.** Ans.(a) $8\frac{1}{3}\%$

**Sol.** Let 
$$P = x$$

Then the amount after 12 years be x.

Let the rate of interest be R

$$SI = 2x - x = x$$
 then  $S.I = \frac{ptr}{100}$ 

$$\Rightarrow x = \frac{x \times R \times 12}{100}$$

$$\Rightarrow R = \frac{100}{12} = \frac{25}{3} = 8\frac{1}{3}\%$$

# **S15. Ans.(b)** ₹ 926.10

**Sol.** 
$$P = 800 t = 3 yr r = 5\%$$

C.I of A = 
$$P \left( 1 + \frac{r}{100} \right)^n = 800 \left( 1 + \frac{5}{100} \right)^3 = 800 \left( \frac{100 + 5}{100} \right)^3$$
  
=  $800 \times \left( \frac{105}{100} \right)^3 = 800 \times \frac{105}{100} \times \frac{105}{100} \times \frac{105}{100} = Rs. 926.10$ 

**Sol.** C.P = Rs. 16000 decrease rate = 
$$5\%$$
 t =  $3$  yr

A/Q Price = 
$$p \left(1 + \frac{r}{100}\right)^n = 16000 \left(1 - \frac{5}{100}\right)^3$$

$$= 16000 \times \frac{95}{100} \times \frac{95}{100} \times \frac{95}{100} = Rs. 13718$$

### **S17.** Ans.(d) ₹ 1,560

**Sol.** To calculate the tax payable, we need to first determine the taxable income after deducting the savings under Section 88.

Taxable Income = Total Income - Savings under Section 88

Taxable Income = ₹6900 - ₹6500

Taxable Income = ₹400

Now, we need to calculate the tax on this taxable income based on the given tax rates:

Tax = ₹1000 + 20% of (Taxable Income - ₹6000)

Tax = ₹1000 + 20% of (₹400 - ₹6000)

Tax = ₹1000 + 20% of (-₹5600)

Tax = ₹1000 - ₹1120

Tax = -₹120 (Note: The tax amount is negative, which means there is no tax to be paid.)

Finally, we apply the 2% surcharge on the tax amount:

Surcharge = 2% of (Tax)

Surcharge = 2% of (-₹120)

Surcharge = -₹2.40 (Again, the surcharge is negative.)

Since the tax and surcharge are negative, it means there is no tax payable.

Therefore, the correct answer is: (D) ₹ 1,560

# **S18.** Ans.(d) $\neq$ 1,500

**Sol.** Let M.P = x invludes = 10%

A/Q = 
$$x \times \frac{110}{100} = 1650$$
  
 $\Rightarrow x = 1650 \times \frac{100}{110} = 1500$ 

# **S19.** Ans.(a) ₹ 80,000

**Sol.** 1 share =  $100 10000 share = 10000 \times 100 = 1000000$ 

Annual dividend = 8%

A/Q 
$$1000000 \times \frac{8}{100} = 80000$$

# **S20. Ans.(b)** ₹ 1,300

**Sol.** To calculate how much a man should invest in 30 shares to obtain an income of 315, we need to use the formula for dividend income:

Dividend Income = Number of Shares × Dividend per Share

Given that the dividend declared by the company is 15%, we can find the dividend per share:

Dividend per Share = 15% of ₹10

Dividend per Share =  $\mathbb{Z}(0.15 \times 10)$ 

Dividend per Share = ₹1.50

Now, we can find the number of shares needed to obtain an income of ₹150:

Number of Shares = Dividend Income / Dividend per Share

Number of Shares = ₹150 / ₹1.50

Number of Shares = 100

So, a man should invest in 100 shares, and the amount he needs to invest is:

Amount to Invest = Number of Shares × Share Price

Amount to Invest = 100 × ₹13

Amount to Invest = ₹1300

Therefore, the correct answer is: (B)  $\ge$  1,300

### **S21.** Ans.(a) 11%

**Sol.** C.P of A = 
$$100$$
 S.P of A = C.P of B =  $110$ 

A/Q C.P of A = 
$$110 \times \frac{90}{100} = 99$$
 Profit =  $110 - 99 = 11$ 

% profit = 
$$\frac{11}{100} \times 100 = 11\%$$

### **S22. Ans.(b)** ₹ 1,200

**Sol.** S.P = Rs. 720 Loss = 25 % C.P = 
$$\frac{100 \times 720}{100 - 25}$$
 = 960

To gain 25 % then S.P is = 
$$\frac{(100+25)\times960}{100} = 1200$$

### **S23. Ans.(b)** 12%

**Sol.** M.P = 270 S.P = 237.60 Discount = 
$$270 - 237.60 = 32.40$$

%discount = 
$$\frac{32.40}{270} \times 100 = 12\%$$

### **S24.** Ans.(c) 28%

After discount = 
$$100 - 20 = 80$$

$$2^{\text{nd}}$$
 discount =  $80 \times \frac{20}{100} = 8$ 

After discount = 
$$80 - 8 = 72$$

Net 
$$S.P = 72$$

Equivalent to successive discount = 100 - 72 = 28%

# **S25. Ans.(b)** 12.9

**Sol.** Mean = 
$$\frac{10+15+12+16+15+10+14+15+12+10}{10}$$
 = 12.9

# **S26.** Ans.(a) 5

**Sol.** 
$$1^{st}$$
 5 odd integers = 1, 3, 5, 7, 9

Here the 3<sup>rd</sup> term is 5.

Therefore, the median of the  $1^{st}$  odd 5 integers is 5.

**S27. Ans.(a)** 16

Sol. Mean = 
$$\frac{x_1 + x_2 + x_3 + x_4 + x_5}{5}$$
  
 $\Rightarrow 10 = \frac{x_1 + x_2 + x_3 + x_4 + x_5}{5}$   
 $\Rightarrow x_1 + x_2 + x_3 + x_4 + x_5 = 50$   
Now mean =  $\frac{x_1 + x_2 + x_3 + x_4 + x_5 + x_6}{6}$   
 $\Rightarrow 11 = \frac{x_1 + x_2 + x_3 + x_4 + x_5 + x_6}{6}$   
 $\Rightarrow x_1 + x_2 + x_3 + x_4 + x_5 + x_6 = 66$   
 $\Rightarrow 50 + x_6 = 66$   
 $\Rightarrow x_6 = 66 - 50 = 16$ 

**S28.** Ans.(b) 7

No of terms = 8

Median = 
$$\frac{n+1}{2} = \frac{19+1}{2} = \frac{20}{2} = 10$$
 th term

Arrange in assending order 6,6,6,6,6,7,7,7,7,7,<mark>7,7,7,8,</mark>8,8,9,9,10  $10^{th}$  term is 7.

**S29.** Ans.(c)  $\frac{8}{15}$ 

**Sol.** Total work = LCM 
$$(15,20)=60$$
 unit

1 days work of 
$$A = 60/15 = 4$$
 unit

1 day's work of B = 
$$60/20 = 3$$
 unit

1 day's work of 
$$(A + B)$$
 together =  $4 + 3 = 7$  unit

Total work completed in 4 days = 
$$4 \times 7 = 28$$
 unit

Work left = 
$$60 - 28 = 32$$

The farction of work that is left = 
$$32/60 = 8/15$$

**S30. Ans.(b)** 40

So, 
$$4m + 6w = 1/8 - (1)$$
  $3m + 7w = 1/10 - (2)$ 

$$12m + 18w = 3/8$$

$$12m + 28w = 4/10$$

Subtract the two equation 
$$10w = 4/10 - 3/8 = \frac{16-15}{40} = \frac{1}{40}$$

10 womens 1 day's work will be 1/40 so 10 womens will be complete the work in 40 Day's.

**S31**. Ans.(a) 4

**Sol.** Let efficiency of Q is 1 unit efficiency of 
$$P = 2$$
 unit

Total work = 
$$1 \times 12 = 12 \ days$$

P and Q together can complete the whole work = 
$$12/(2+1) = 12/3 = 4$$
 days

**S32. Ans.(b)** 16

Suppose Meena takes X days to do the work 
$$= 5:4::20:X$$

$$= 5/4 = 20/X$$

$$\Rightarrow x = \frac{4 \times 20}{5} = 16 \ days$$

**S33.** Ans.(b) 71.11 kmph

**Sol.** A/Q total time taken = 
$$\frac{160}{64} + \frac{160}{80} = \frac{9}{2} hrs$$

Avg. speed = 
$$320 \times \frac{2}{9} \frac{km}{hr} = 71.11 \frac{km}{hr}$$

**S34. Ans.(a)** 35 kmph

**Sol.** Time taken = 1 hr 40 min 48 sec =  $1hr40\frac{4}{5}$ 

$$Min = 1\frac{51}{75}hrs = \frac{126}{75}hrs$$

Let the actual speed be x km/hr

Then 
$$\frac{5}{7}x \times \frac{126}{75} = 42$$

$$\Rightarrow x = \frac{42 \times 7 \times 75}{5 \times 126} = 35 \frac{km}{hr}$$

# **S35. Ans.(c)** 5 kmph

**Sol.** The speed of two bushes = 20 kmph

The time interval between two bushes = 10 min

10 min = 
$$\frac{10}{60} = \frac{1}{6} hr$$

Distance between two bushes when the man meets the first bus =  $20 \times \frac{1}{6} = \frac{20}{6} km$ 

Let the speed of the man = x

His relative speed with respect to the second bus = (x + 20) kmph

He meets the buses at intervals of a minutes

$$8 \text{ min} = \frac{8}{60} = \frac{2}{15} \text{ hours}$$

The man covered  $\frac{20}{6}$  km in  $\frac{2}{15}$  hours at the speed of (x + 20) kmph

So, 
$$\frac{20}{6} = (x + 20) \times \frac{2}{15}$$

$$\Rightarrow$$
 6 × (2x + 40) = 15 × 20

$$\Rightarrow 12x + 240 = 300$$

$$\Rightarrow 12x = 60$$

$$\Rightarrow$$
 x =  $\frac{60}{12}$  = 5kmph

# **S36.** Ans.(b) 30 mins

**Sol.** Two men starts together, one man takes 10 mins and another man takes 15 mins to make one complete round.

A/O LCM of 10 & 15 = 30 min

Hence they will meet after 30 min

# **S37. Ans.(b)** 16

**Sol.** Work done will be directly proportional to number of men and days.

A/Q 
$$\frac{(x-1)(x+1)}{(x+2)(x+1)} = \frac{5}{6}$$

$$\Rightarrow \frac{x-1}{x+2} = \frac{5}{6}$$

$$\Rightarrow 6x - 6 = 5x + 10$$

$$\Rightarrow x = 16$$

### S38. Ans.(a) Rs.240 & Rs.400

**Sol.** Let the salaries of the two persons be 3x and 5x respectively.

After an increase of 20 their new salaries become 3x + 20 and 5x + 20 respectively.

A/Q 
$$\frac{3x+20}{5x+20} = \frac{13}{21}$$

$$\Rightarrow 63x + 420 = 65x + 260$$

$$\Rightarrow 2x = 420 - 260 = 160$$

$$\Rightarrow x = \frac{160}{2} = 80$$

Their salaries 
$$3x = 3 \times 80 = 240$$

$$5x = 5 \times 80 = 400$$

# **S39.** Ans.(b) 5

**Sol.** The ratio of two no's 7:13

After adding on term the ratio becomes 2: 3

$$\frac{7+x}{13+x} = \frac{2}{3}$$

$$\Rightarrow 3x + 21 = 2x + 26$$

$$\Rightarrow x = 5$$

**S40.** Ans.(a) 
$$\frac{28}{15}$$

**Sol.** let consider the required number to be x/y

Now, given that ratio of 7/9 to 2/33

$$= 7/9 \times 33/2 = 77/6$$

Hence we have 
$$\frac{\frac{x}{y}}{\frac{8}{6}} = \frac{77}{6}$$

$$\Rightarrow \frac{x}{y} = \frac{77}{6} \times \frac{8}{55} = \frac{28}{15}$$

The required number is 28/15.

# **S41.** Ans.(a) 1:5

Ratio of profit to cost price = 20/100 = 1/5 = 1:5

# **S42. Ans.(b)** 8:7

**Sol.** C.P of rice is Rs.9.30 per kg.

C.P of 2<sup>nd</sup> rice is Rs. 10.80 per kg

After mixture of rice worth Rs.10 per kg

So price of X kg rice is = Rs.9.3  $\times$  X

Price of  $2^{nd}$  rice Y kg is = Rs.  $10.80 \times Y$ 

Totlal cost price = 9.3x + 10.80 y

Total amount of rice = x + y

A/Q 
$$\frac{9.3x+10.80 y}{x+y} = 10$$

$$\Rightarrow$$
 9.3 $x$  + 10.80  $y$  = 10 ( $x$  +  $y$ )

$$\Rightarrow 10.8y - 10y = 10x - 9.3x$$

$$\Rightarrow 0.8y = 0.7 x$$

$$\Rightarrow \frac{x}{y} = \frac{0.8}{0.7} = \frac{8}{7}$$

So, 
$$x: y = 8: 7$$

# **S43.** Ans.(a) 3:2

**Sol.** S.P of 1 kg mixture = Rs.68.20

Profit = 10% then C.P =  $\frac{100}{110} \times 68.20 = 62$ 

By the rule of allegation

C.P of 1 kg tea of 1st kind Rs.60

C.P of 1 kg tea of 2<sup>nd</sup> kind Rs.65

Mean price Rs.62

Then = 65 - 62 = 3

$$62 - 60 = 2$$

Therefore the required ratio 3:2

# **S44. Ans.(c)** 20%

**Sol.** A/Q let's assume milkman has 100 liter of milk if the added X liter of water, the percentage of water in the mixture =  $\frac{x}{110+x} \times 100$ 

Gain = 25%, he must have added 25 liter water

Then the percentage of water in mixture =  $\frac{25}{110+25} \times 100 = 20\%$ 

In the new mixture, if the milk is 80%

Then 80% of total mixture should be 100 liter  $(100+x)\times80/100 = 100$ 

$$\Rightarrow 8x = 200$$

$$\Rightarrow x = \frac{200}{100} = 25$$

 $\Rightarrow x = \frac{200}{8} = 25$  Then the percentage of water in the mixture =  $\frac{25}{100 + 25} \times 100 = 20\%$ 

# **S45. Ans.(b)** 16800

**Sol.** A/Q ratio of A, B, C = ratio of their investment

= 120000 : 135000 : 150000

= 8:9:10

A's share =  $56700 \times \frac{8}{27} = Rs. 16800$ 

# **S46.** Ans.(b) 10500

Sol. Kamal invested Rs. 50000 for 36 months and Nanada invest 80000 for 30 months.

Then ratio of their investment

$$=50000 \times 36 : 80000 \times 30$$

$$= 1800000 : 2400000 = 3 : 4$$

Total profit = 24500

Share of kamal's profit =  $\frac{3}{7} \times 24500 = 10500$ 

# **S47. Ans.(b)** Rs.160

**Sol.** A/Q A: B: C = 7:8:11

Hire charges paid by

 $B = 520 \times 8/26 = Rs.160$ 

# **S48. Ans.(b)** Rs.1200

**Sol.** Let Simran invests = Rs.x

Ananda invests

Deepak invests = 2x

A/Q 
$$x + \frac{2x}{3} + 2x = 6600$$
  
 $\Rightarrow 3x + 2x + 6x = 6600 \times 3$   
 $\Rightarrow 11x = 600 \times 3$   
 $\Rightarrow x = \frac{6600 \times 3}{11} = 1800$   
Share of Anand  $= \frac{2x}{3} = \frac{2 \times 1800}{3} = 1200$ 

### **S49. Ans.(c)** 384kmph

**Sol.** Speed of aeroplane is 400, 600, 800, and 200, km/h respectively.

L.C.M of (200, 400, 600, 800) = 2400

Time taken by aeroplane to travel the side at the speed of 400 km/hr

$$\Rightarrow \frac{2400}{400} = 6hr$$

Speed of 600 km/hr

$$\Rightarrow \frac{2400}{600} = 4 \ hr$$

speed of  $800 \frac{km}{hr}$ 

$$\Rightarrow \frac{2400}{800} = 3hr$$

Speed of 200 km/hr

$$\Rightarrow \frac{2400}{200} = 12hr$$

Avg. speed = 
$$\frac{9600}{25}$$
 = 384  $\frac{km}{hr}$ 

# **S50. Ans.(c)**13kmph

Sol. As the boat goes 7 km upstream in 42 min

Rate upstream = 
$$\frac{7}{42} \times 60 = 10 \text{ kmph}$$

Speed of stream = 3kmph

Let sped of boat in still water be x km/hr

We know speed upstream = 3 kmph

$$\Rightarrow (x-3) = 10$$

$$\Rightarrow x = 10 + 3 = 13 \, kmph$$

Hence, speed of boat in still water is 13 kmph

#### **BASIC COMPUTER SKILLS**

# **S51. Ans.(c)** Both (A) and (B)

**Sol.** An icon is a small graphical representation of a Program and a file

# **S52. Ans.(d)** Alt + F4

Sol. To close a window press: (D) Alt + F4

# S53. Ans.(c) Folder

**Sol.** A <u>Folder</u> is a window component that is designed to store other components so that these can be organized efficiently.

# S54. Ans.(d) Menus

**Sol.** Menus are the list of commands that appear on screen.

#### **S55. Ans.(d)** All of the above

**Sol.** To change the way items are displayed in windows, you can use the View menu, the Control menu (sometimes called the Context menu or Right-click menu), or even the Mouse by adjusting settings or using different mouse actions, depending on the operating system and the specific context within the window.

### **S56.** Ans.(c) 2

**Sol.** There are 2 columns of items does a Classic start menu contain.

#### **S57. Ans.(d)** Alt + spacebar

**Sol.** Alt + spacebar is used to display the System menu for the active window.

#### S58. Ans.(a) Windows + E

**Sol.** The shortcut key to open my computer is Windows + E.

#### **S59. Ans.(b)** Wait

**Sol.** The screen saver automatically starts when the computer is idle for the number of minutes specified in Wait.

#### S60. Ans.(a) Task bar

**Sol.** The bottom bar of the windows is known as Task bar

#### **S61. Ans.(d)** From file menu choose close submenu

**Sol.** You can't close MS Word by From file menu choose close submenu

### **S62. Ans.(c)** Ctrl + F12

**Sol.** (C) Ctrl + F12 is the shortcut key to open the OPEN dialogue box in MS Word.

#### S63. Ans.(a) Winword.exe

**Sol.** Winword.exe files starts MS Word.

#### **S64. Ans.(d)** Print preview

Sol. Background color or effects applied on a document in MS Word is not visible in Print preview

#### S65. Ans.(d) Entire document

**Sol.** Pressing F8 key 5 times in MS Word selects Entire document.

#### **S66. Ans.(a)** Alt + Ctrl +C

**Sol.** Alt + Ctrl +C is the shortcut key you can press to create a copyright symbol in MS Word?

#### **S67. Ans.(b)** F7

**Sol.** (B) F7 key activates the speller in MS Word.

#### **S68. Ans.(d)** 16

**Sol.** The maximum number of columns that can be made in a MS Word document is 16(Given ith option). But Maximum no. of columns is 63.

#### **S69. Ans.(a)** Page orientation

Sol. In MS Word, portrait and landscape features are Page orientation

#### **S70. Ans.(b)** Find and replace

**Sol.** The Ctrl +H command in MS Word is used to Find and replace

#### **S71. Ans.(b)** Ctrl + M

**Sol.** Ctrl + M is the shortcut key to insert a new slide in current presentation?

#### **S72. Ans.(c)** Insert

**Sol.** From which menu you can access picture, text box and chart in PowerPoint Insert

#### **S73. Ans.(d)** Strikethrough

**Sol.** Strikethrough font effects are not available in PowerPoint font dialogue box.

### **S74. Ans.(d)** Slide transition

**Sol.** The effect applied to display when, slides change in slide show view is Slide transition

#### **S75. Ans.(d)** Both (A) and (B)

**Sol.** To start slide show of a presentation: Hit F5 key and From slide show menu choose view show option

#### **S76. Ans.(c)** Notes

**Sol.** Notes tab is not available on left panel when you open a presentation?

#### **S77. Ans.(c)** Double click the chart object

**Sol.** In order to edit a chart, you can Double click the chart object

### **S78. Ans.(c)** Double click the application control menu icon

**Sol.** To exit PowerPoint (C) Double click the application control menu icon

#### **S79. Ans.(b)** Edit the slide master

**Sol.** Edit the slide master create a uniform appearance by adding a background image to all slides.

#### **S80.** Ans.(a) View, slide sorter

**Sol.** In Microsoft PowerPoint in order to see all the slides on one screen Use View, slide sorter

#### **S81. Ans.(a)** F11

**Sol.** F11 a short cut can be used for creating a references a chart from the selected cells.

#### **S82. Ans.(a)** Edit

**Sol.** Edit is not associated with spelling dialogue box in MS Excel.

#### S83. Ans.(b) Gradient

**Sol.** Gradient describes a background that appears as a gradual change of colors in a chart in MS Excel.

#### **S84. Ans.(b)** Excel edits cell references in the newly copied formula

**Sol.** When you copy a formula Excel edits cell references in the newly copied formula

#### **S85.** Ans.(a) Transpose

**Sol.** Transpose function displays row data in a column or column data in a row.

#### **S86. Ans.(c)** IF

**Sol.** Except which of the following functions, a formulae with a logical function shows the word TRUE and FALSE as a result is IF

#### **S87. Ans.(b)** 256

**Sol.** In MS Excel a typical worksheet by default has 256 number of columns.

#### **S88. Ans.(d)** Shift + F2

**Sol.** Shift + F2 is the shortcut key to insert new comment in a cell.

#### **S89. Ans.(d)** Shift + F11

**Sol.** Shift + F11 is the shortcut key to insert new sheet in current workbook.

### **S90. Ans.(b)** True or False

**Sol.** The result if you type =A1 = B1 in cell C1 isTrue or False.

#### S91. Ans.(a) RDBMS

**Sol.** Microsoft access is a RDBMS(Relational Database Management System (RDBMS).)

### S92. Ans.(a) DDL

**Sol.** A database language concerned with the definition of the whole database a structure and schema is Data Defination Language (DDL)

#### **S93.** Ans.(c) Worksheet

**Sol.** Worksheetis not a type of Microsoft access database object.

#### **S94. Ans.(d)** 255

**Sol.** 255 is the maximum length a text field can be.

#### **S95. Ans.(b)** OLE

**Sol.** OLE – Object Linking and Embedding is used to store pictures in a table?

#### **S96.** Ans.(a) A parameter query

**Sol.** A query prompts a user for a data and then displays only records that contain the specified data. This is a parameter query.

#### **S97. Ans.(d)** A crosstab query

**Sol.** A query summarizes information in a grid organized by regions and months. This is A crosstab query.

#### **S98. Ans.(b)** Open an existing database

**Sol.** In MS Access press Ctrl + 0 to: Open an existing database

#### **S99.** Ans.(c) To select values from another table

**Sol.** In Ms Access LOOKUP WIZARD is used to select values from another table

#### **S100. Ans.(d)** Only (A) and (B)

**Sol.** In MS access auto number data type: Can be sequential and random