Participant ID:	
Participant Name:	
Test Center Name:	
Test Date:	27/09/2018
Test Time:	8:30 AM - 10:30 AM
Subject:	TGT NATURAL SCIENCE FEMALE

Section : **Mental Ability**

Q.1 The following are the conditions for selecting list of a suitable candidates to be called for interview after the written test for the recruitment is conducted / organized for management-level persons for a multi-national company. Providing accounting services and sales the candidate must
(a) be holding a graduation in basic science with 65% or above or B.E degree with 55% and above marks
(b) have passed the written test with 70% or above marks
(c) the age must be in the group 25 to 30 years as on 1/4/18
(d) have experience in an accounting firms for three years and diploma in accounting with 60% or above marks
(e) be presently drawing CTC of 6 Lakhs per annum and above
In case the applicant who satisfies all other terms above except
1) at (a) above, then be referred as Junior Accountant
2) at (a) (d) & (e) above then be referred as
Trainee-Accountant
Satisfying all the above with experience of 5 years then be referred as Senior-Accountant
Satisfying all the above criteria (a-e) with CA/ ICWA/ MBA (Finance) then be refereed as manager (Accounts)
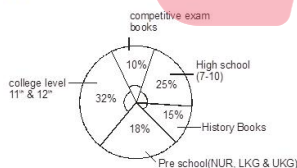Read all the above information and answer the following question:

Sunanda has done her graduation in basic science with 62% of marks. She has passed the written test with 72% of marks. She is 26 years as on April 2018. She has diploma in accounting with 58% of marks. She may be refereed for the position of

Question ID : 16794315944

Ans ✗ 1. Manager-Accounts
✗ 2. Senior-Accountant
✗ 3. Junior-Accountant
✔ 4. Trainee-Accountant

Q.2 The following pie chart shows information about the books published by a publication company "XYZ". The total number of books published by the company are 12,462 in 2016-17 including color, black & white publications approximately.

Question ID : 16794315941

competitive exam books 10%
High school (7-10) 25%
college level 11ᵗʰ & 12ᵗʰ 32%
15% History Books
18% Pre school(NUR, LKG & UKG)

How many books of History are published by XYZ in 2016-17?

Ans ✗ 1. 2243
✗ 2. 3987
✔ 3. 1869
✗ 4. 3115

Q.3 What follows the series JX, PR, VL, ?, HZ

Question ID : 16794315955

Ans ✗ 1. BT
✗ 2. UC
✗ 3. RL
✔ 4. BF

Q.4 Human always have _____.

Question ID : 16794315946

Ans ✗ 1. Toys

✔ 2. Life

✘ 3. Status

✘ 4. Money

Q.5 How would the pattern appear when the transparent sheet is folded at the dotted line?

Ans

✔ 1.

✘ 2.

✘ 3.

✘ 4.

Q.6 Spot out the embedded figure as shown in the given options.

Ans

✘ 1.

✘ 2.

✔ 3.

✘ 4.

Q.7 If < means -, > means +, = means X, and $ means ÷ find the value of 13 > 72 $ 4 < 8?

Ans ✘ 1. 25

✔ 2. 23

✗ 3. 18

✗ 4. 20

Q.8 Find the odd pair of words:

Question ID : **16794315952**

Ans

✗ 1. Turkey : Lira

✗ 2. Japan : Yen

✔ 3. Burma : Peso

✗ 4. Netherlands : Guilder

Q.9 While sitting in the park you observe that a strange man leaves a bag in the corner and goes away on a motorbike. You would

Question ID : **16794315943**

Ans

✔ 1. Inform the police at nearby booth

✗ 2. Chase the person

✗ 3. Remain engaged in your work

✗ 4. Call the person

Q.10 The ratio of the mother's age to his son's age is 8 : 3. The product of their ages is 216. The ratio of their ages after 6 years will be:

Question ID : **16794315951**

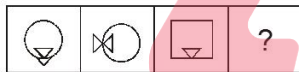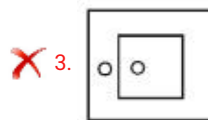**Ans**

✔ 1. 2 : 1

✗ 2. 5 : 7

✗ 3. 7 : 4

✗ 4. 13 : 6

Q.11 Select the option that is related to the third term in the same way as the second term is related to the first term.

Question ID : **16794315937**

Ans

✔ 1.

✗ 2.

✗ 3.

✗ 4.

Q.12 Find the odd pair of numbers:

Question ID : **16794315953**
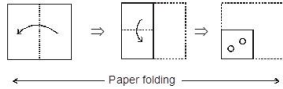
Ans

✔ 1. 15 − 8

✗ 2. 60 − 30

✗ 3. 36 − 18

✗ 4. 48 − 24

Q.13 NEST is related to BIRD in the same way as STABLE is related to:

Ans
- ✗ 1. SPIDER
- ✔ 2. HORSE
- ✗ 3. OWL
- ✗ 4. MOUSE

Q.14 A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicate how it will be appear when opened?

← Paper folding →

Ans
- ✔ 1.
- ✗ 2.
- ✗ 3.
- ✗ 4.

Q.15 First bunch of balls has $\frac{3}{4}$ again as many balls as a second bunch. If the second bunch has 6 balls less than the first bunch, then the number of balls in the first bunch is:

Ans
- ✗ 1. 19
- ✔ 2. 14
- ✗ 3. 20
- ✗ 4. 25

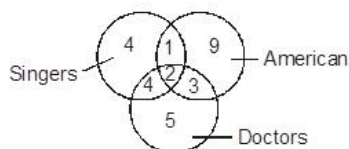**Q.16** Sandip is brother of Mythri. How is Mythris only brother's father's mother related to Sandip?

Ans
- ✗ 1. Aunt
- ✔ 2. Grand mother
- ✗ 3. Sister
- ✗ 4. Mother

Q.17 Study the following figure carefully and answer the given question:

Which region denotes American Doctors who are not Singers?

Ans
- ✗ 1. 9
- ✗ 2. 5

✗ 3. 8

✓ 4. 3

Q.18 Choose the odd figure out.

Ans
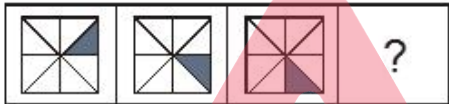
✗ 1. X

✗ 2. O

✓ 3. L

✗ 4. C
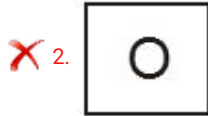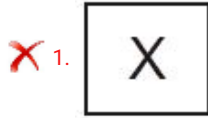
Q.19 What will be the next figure in the series?

Ans

✗ 1.

✗ 2.

✓ 3.

✗ 4.
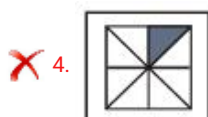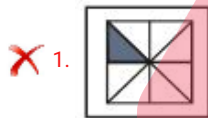
Q.20 What follows the series 7, 20, 46, 85,?

Ans
✗ 1. 160

✗ 2. 140

✓ 3. 137

✗ 4. 142

Section : **General Awareness**

Q.1 Nagarjuna (Nagasena) converted which famous Indo-Greek ruler to Buddhism?

Question ID : 16794315958

Ans
- ✗ 1. Megasthenese
- ✗ 2. Alexander
- ✔ 3. Menander
- ✗ 4. Selucus

Q.2 Fertilizer major IFFCO has partnered with _____ based technology firm iMandi to launch an e-commerce platform IFFCO iMandi (an mobile application and web portal) to address all needs of the farming community associated with it.

Question ID : 16794315965

Ans
- ✔ 1. Singapore
- ✗ 2. Indonesia
- ✗ 3. Malaysia
- ✗ 4. Nepal

Q.3 NITI Aayog is going to organize 'MOVE: Global Mobility Summit' on September 7-8, 2018 in collaboration with various ministries and industry partners in _____.

Question ID : 16794315964

Ans
- ✗ 1. Gurugram
- ✔ 2. New Delhi
- ✗ 3. Noida
- ✗ 4. Faridabad

Q.4 'Koyna Project' is an irrigation project of which state?

Question ID : 16794315960

Ans
- ✗ 1. Kerala
- ✔ 2. Maharashtra
- ✗ 3. Rajasthan
- ✗ 4. Karnataka

Q.5 The second edition of Unnat Bharat Abhiyan, that aims to enrich Rural India was launched in _____.

Question ID : 16794315973

Ans
- ✗ 1. June, 2018
- ✗ 2. March, 2018
- ✔ 3. April, 2018
- ✗ 4. May, 2018

Q.6 By which constitutional amendment the representation of UT's in Lok Sabha was decreased from 25 to 20?

Question ID : 16794315962

Ans
- ✔ 1. 31st Constitutional Amendment Act, 1973
- ✗ 2. 30th Constitutional Amendment Act, 1972
- ✗ 3. 36th Constitutional Amendment Act, 1975
- ✗ 4. 35th Constitutional Amendment Act, 1974

Q.7 Which Chief Justice of India acted as President of India for the first time in Indian history?

Question ID : 16794315963

Ans
- ✗ 1. Justice K. Subba Rao
- ✔ 2. Justice M. Hidayatullah
- ✗ 3. Justice M. Hameedullah Beg

✘ 4. Justice Y.V. Chandrachud

Q.8 Who among the following is not a classical dancer of Kathak?

Question ID : 16794315967

Ans
✘ 1. Birju Maharaj

✘ 2. Sitara Devi

✘ 3. Shovana Narayan

✔ 4. Rita Devi

Q.9 India's football team captain Sunil Chhetri became joint second highest international goal scorer among active players along with Lionel Messi after scoring his _____ International goal in the match between India and Kenya.

Question ID : 16794315970

Ans
✔ 1. 64th

✘ 2. 62nd

✘ 3. 60th

✘ 4. 61st

Q.10 Where is the capital city of Bulgaria located?

Question ID : 16794315959

Ans
✘ 1. Dakar

✘ 2. Baku

✔ 3. Sofia

✘ 4. Suva

Q.11 World famous ancient Nalanda University is located in which state of India?

Question ID : 16794315956

Ans
✔ 1. Bihar

✘ 2. Uttar Pradesh

✘ 3. W. Bengal

✘ 4. Punjab

Q.12 The Union Government has reduced minimum yearly deposit required under popular girl child savings scheme, Sukanya Samriddhi Yojana to _____.

Question ID : 16794315974

Ans
✘ 1. ₹ 200

✘ 2. ₹ 500

✘ 3. ₹ 750

✔ 4. ₹ 250

Q.13 T.R. Mahalingam is a famous _____ player of India.

Question ID : 16794315968

Ans
✔ 1. Flute

✘ 2. Sitar

✘ 3. Sarod

✘ 4. Veena

Q.14 Where is the headquarter of National Council for Teacher Education (NCTE) situated?

Question ID : 16794315972

Ans
✘ 1. Bhubaneswar

✘ 2. Nagpur

✗ 3. Bangalore

✓ 4. New Delhi

Q.15 Who invented the Electrocardiogram (Electrocardiography)?

Question ID : 16794315971

Ans ✓ 1. Willem Einthoven

✗ 2. Christian Bernard

✗ 3. James Watson

✗ 4. Karl Landsteiner

Q.16 Khoria Dance is a folk dance associated with which state of India?

Question ID : 16794315966

Ans ✓ 1. Haryana

✗ 2. Himachal Pradesh

✗ 3. Bihar

✗ 4. Rajasthan

Q.17 Which of the following script is written from right to left?

Question ID : 16794315957

Ans ✗ 1. Pali

✗ 2. Brahmi

✗ 3. Prakrit

✓ 4. Kharosthi

Q.18 The State shall endeavour to organise agriculture and animal husbandry on modern and scientific lines under which article?

Question ID : 16794315961

Ans ✗ 1. Article 51

✗ 2. Article 50

✗ 3. Article 49

✓ 4. Article 48

Q.19 NABARD has recently launched Centre for Climate Change in _____, the first of its kind centre in South East Asia.

Question ID : 16794315975

Ans ✗ 1. Hyderabad

✗ 2. Allahabad

✗ 3. Nagpur

✓ 4. Lucknow

Q.20 Which player was given the Golden Ball award in the 2018 FIFA World Cup?

Question ID : 16794315969

Ans ✓ 1. Luka Modric

✗ 2. Eden Hazard

✗ 3. Harry Kane

✗ 4. Kylian Mbappe

Section : **Arithmetic Ability**

Q.1 If 2 men or 5 boys can do a work in 74 hours, then 5 men and 6 boys will do that work in how many hours?

Question ID : 16794315991

Ans

✗ 1. 24

✔ 2. 20

✗ 3. 16

✗ 4. 18

Q.2 By selling 40 articles, a shopkeeper loses cost price of 4 articles. What is his loss percent?

Question ID : **16794315983**

Ans

✗ 1. $\frac{100}{9}\%$

✗ 2. $\frac{100}{11}\%$

✔ 3. 10%

✗ 4. $\frac{35}{4}\%$

Q.3 A and B can do a piece of work in 24 days and 30 days respectively. They together started the work but B left after 6 days. In how many days A alone will complete the remaining work?

Question ID : **16794315992**

Ans

✗ 1. 13.4

✗ 2. 13.6

✔ 3. 13.2

✗ 4. 13.8

Q.4 A boat can go 18 km upstream and return to original point in $2\frac{1}{2}$ hours. If the speed of stream is 3 km/h, what is the speed of boat in still water in km/h?

Question ID : **16794315990**

Ans

✗ 1. 10

✗ 2. 12

✗ 3. 14

✔ 4. 15

Q.5 A trader marks his goods 50% above cost price. He sells 40% of goods at the marked price, 25% at a discount of 20% and remaining at a discount of 30%. What is his overall profit percent?

Question ID : **16794315984**

Ans

✗ 1. 22.75%

✗ 2. 25.75%

✗ 3. 20.75%

✔ 4. 26.75%

Q.6 The sum of dimensions of a cuboid is 58 cm and its diagonal is 34 cm. What is the total surface area of the cuboid?

Question ID : **16794315988**

Ans

✗ 1. 2168 cm^2

✗ 2. 2264 cm^2

✗ 3. 2358 cm^2

✔ 4. 2208 cm^2

Q.7 The sides of a triangle are 40 cm, 42 cm and 58 cm. What is the length of the shortest altitude of the triangle? (Correct to one decimal place)

Question ID : **16794315987**

Ans

✗ 1. 35.8 cm

✔ 2. 29 cm

✗ 3. 40 cm

✗ 4. 31.2 cm

Q.8

The value of $\dfrac{(3.6)^3 - (5.2)^3 + (0.6)^3 + 3.6 \times 5.2 \times 1.8}{36 \times 36 + 52 \times 52 + 0.36 + 36 \times 52 + 52 \times 0.6 - 2.16}$ is:

Ans
- ✗ 1. -0.1
- ✗ 2. 0.01
- ✗ 3. 0.1
- ✓ 4. -0.01

Q.9 A person takes a loan at simple interest of 7% per annum for first year with an increase of 0.5% in each subsequent years. If the interest after 4 years is ₹ 6,634, how much loan did he take?

Ans
- ✗ 1. ₹ 20,900
- ✗ 2. ₹ 20,500
- ✗ 3. ₹ 21,200
- ✓ 4. ₹ 21,400

Q.10 An alloy of copper and zinc contains copper and zinc in the ratio 5 : 3. In 2.8 kg of this alloy, 1.2 kg of copper is added. What is the ratio of copper and zinc in the new mixture?

Ans
- ✗ 1. $48 : 21$
- ✓ 2. $59 : 21$
- ✗ 3. $52 : 21$
- ✗ 4. $55 : 21$

Q.11 The HCF of two numbers is 68 and sum of the numbers is 1224. How many such pair of numbers are possible?

Ans
- ✓ 1. 3
- ✗ 2. 9
- ✗ 3. 7
- ✗ 4. 5

Q.12 In an examination, 72% students passed in science and 68% passed in mathematics. If 16% failed in both subjects, what percentage of students passed in both subjects?

Ans
- ✗ 1. 64%
- ✗ 2. 58%
- ✗ 3. 44%
- ✓ 4. 56%

Q.13 The sum of digits of the least five digit number which when divided by 4, 6, 9 and 14 leaves remainder 3 in each case is:

Ans
- ✗ 1. 14
- ✓ 2. 12
- ✗ 3. 15
- ✗ 4. 11

Q.14 If $a : b = 5 : 6$, $b : c = 3 : 4$, then $2a : 5b : 8c$ is equal to:

Ans
- ✗ 1. $6 : 18 : 35$
- ✗ 2. $6 : 18 : 25$
- ✗ 3. $5 : 12 : 28$
- ✓ 4. $5 : 15 : 32$

Q.15

The difference between compound interest and simple interest on ₹ 6,200 for 2 years is ₹ 30.38. What is the rate of interest per annum?

Ans

✗ 1. 6%

✗ 2. 8%

✗ 3. 5%

✔ 4. 7%

Q.16 The value of $3 + \dfrac{1}{1 + \dfrac{1}{3 + \dfrac{1}{4}}}$ is equal to:

Ans

✔ 1. $\dfrac{64}{17}$

✗ 2. $\dfrac{48}{13}$

✗ 3. $\dfrac{25}{7}$

✗ 4. $\dfrac{38}{11}$

Q.17 A train without stoppage travels at an average speed of 80 km/h and with stoppage it travels with a speed of 60 km/h. How many minutes does the train stop on an average per hour?

Ans

✗ 1. 8

✔ 2. 15

✗ 3. 10

✗ 4. 12

Comprehension:

The table given here gives the results of a survey conducted about the number of days in a week they do exercise. Read the table and answer following questions.

Number of days	Number of people	
	Male	Female
0	18	25
1	24	32
2	40	45
3	35	25
4	17	14
5	6	19

SubQuestion No : 18

Q.18 If pie-chart is to be drawn about total persons and the number of days, what will be the central angle of the sector representing persons who do exercise for 3 days in a week to nearest degree?

Ans

✗ 1. 40°

✔ 2. 50°

Comprehension:

The table given here gives the results of a survey conducted about the number of days in a week they do exercise. Read the table and answer following questions.

Number of days	Number of people	
	Male	Female
0	18	25
1	24	32
2	40	45
3	35	25
4	17	14
5	6	19

SubQuestion No : 19

Q.19 What percentage of persons exercise a less than two days to the total persons surveyed?

Question ID : 16794315995

Ans   X 1. 34%

    X 2. 61.33%

    X 3. 30%

    ✔ 4. 33%

Comprehension:

The table given here gives the results of a survey conducted about the number of days in a week they do exercise. Read the table and answer following questions.

Number of days	Number of people	
	Male	Female
0	18	25
1	24	32
2	40	45
3	35	25
4	17	14
5	6	19

SubQuestion No : 20

Q.20 What is the ratio of females to males who were surveyed?

Question ID : 16794315994

Ans   ✔ 1. 7 : 8

    X 2. 5 : 6

    X 3. 15 : 16

Section : **General English**

Q.1 Fill in the blank in the given sentence with the correct relative pronoun:

He spoke about the girl _____ father was my father's colleague.

Question ID : **16794316000**

Ans
✗ 1. who

✗ 2. whose

✗ 3. whom

✔ 4. which

Q.2 The given sentence is divided into four parts. One of them contains an error. Identify the part that contains the error.

A. At the year 1857
B. In the summer months
C. The Indian sepoys rose
D. In mutiny against the British

Question ID : **16794316011**

Ans
✗ 1. A

✔ 2. D

✗ 3. B

✗ 4. C

Q.3 Which of the following options is synonymous to the underlined word in the given sentence:

The internet has become ubiquitous as now there are no homes or workplaces, schools or government offices that can operate without it.

Question ID : **16794316002**

Ans
✔ 1. Omnipresent

✗ 2. Complete

✗ 3. Expendable

✗ 4. Inevitable

Q.4 All the options are synonyms of the underlined word in the given sentence, but only one of them suits the context. Identify the suitable option.

The courts have ordered the government to expedite the investigation.

Question ID : **16794316007**

Ans
✗ 1. Advance

✗ 2. Further

✔ 3. Accelerate

✗ 4. Precipitate

Q.5 Which of the following options is the correct reported form of the given sentence:

She asked Rakshana, "Does your brother work in an engineering college?"

Question ID : **16794316001**

Ans
✗ 1.
She asked Rakshana if her brother worked in an engineering college.

✗ 2.
She asked Rakshana whether her brother worked in an engineering college.

✗ 3.
She asked Rakshana whether her brother was working in an engineering college.

✔ 4.
She asked Rakshana if her brother was working in an engineering college.

Q.6 Which of the following options is synonymous to the underlined word in the given sentence:

He was fully involved in the <u>clandestine</u> operation.

Ans
- ✗ 1. Dangerous
- ✗ 2. Community
- ✗ 3. Legal
- ✔ 4. Secret

Q.7 The given sentence is divided into four parts. One of them contains an error. Identify the part that contains the error.

A. If I were the Principal
B. I would have included
C. Eggs in the daily meal
D. Provided to the children

Ans
- ✔ 1. C
- ✗ 2. B
- ✗ 3. D
- ✗ 4. A

Q.8 The given sentence is divided into four parts. One of them contains an error. Identify the part that contains the error.

A. The spicy side dish
B. is a perfect compliment
C. To the main dish
D. which is bland

Ans
- ✗ 1. D
- ✗ 2. C
- ✗ 3. B
- ✔ 4. A

Q.9 Which of the following options is opposite in meaning to the underlined word in the given sentence:

The news report is a complete <u>fabrication</u>.

Ans
- ✗ 1. Truth
- ✗ 2. Lie
- ✔ 3. Fantasy
- ✗ 4. Cloth

Q.10 Complete the given cause effect sentence using the correct option:

The search party took a long time to reach the accident site _____

Ans
- ✗ 1. on account of which was bad weather.
- ✗ 2. due to the inclement weather.
- ✔ 3. because of there was heavy snow.
- ✗ 4. since there was snow in the weather.

Q.11 All the following pairs, except one, are antonyms of each other, the second word in the pair being formed by a negative prefix. Find the odd pair:

Ans
- ✗ 1. Valuable - Invaluable
- ✗ 2. Measurable - Immeasurable
- ✗ 3. Legitimate - Illegitimate
- ✔ 4. Just - Unjust

Q.12 Fill in the blank in the given sentence with the correct passive verb:

The state team _____ in a single match throughout this tournament.

Ans ✔ 1. has not been beaten

✘ 2. has not been beat

✘ 3. had not beaten

✘ 4. had not been beat

Q.13 Complete the conditional sentence with the correct option:

If Rani were to publish more papers, _____

Ans ✘ 1. she got her promotion in time.

✘ 2. she will get her promotion in time.

✘ 3. she would have got her promotion in time.

✔ 4. she would get her promotion in time.

Q.14 Which of the following options is opposite in meaning to the underlined word in the given sentence:

Fame, money and power are all transient.

Ans ✘ 1. Corrupt

✘ 2. Permanent

✘ 3. Noisy

✔ 4. Temporary

Q.15 The given sentence is divided into four parts. One of them contains an error. Identify the part that contains the error.

A. Big, faceless corporate houses
B. Act without any consideration
C. For the affect they have
D. On individuals

Ans ✘ 1. A

✘ 2. B

✔ 3. D

✘ 4. C

Comprehension:

Read the given passage and answer the following questions

1. Scientists have discovered a trove of forty-four planets in solar systems beyond our own in one go, dwarfing the usual number of confirmations from extrasolar surveys.

2. The findings will improve existing models of solar systems, and may help researchers investigate exoplanet atmospheres.

3. Novel techniques developed to validate the find could accelerate the confirmation of more extrasolar planet candidates.

4. Astronomers pooled data from NASA's Kepler and the ESA's Gaia space telescopes. They confirmed the existence of these 44 exoplanets and described various details about them.

5. A portion of the findings yield some surprising characteristics. "For example, four of the planets orbit their host stars in less than 24 hours," said John Livingston, a graduate student at the University of Tokyo in Japan. "In other words, a year on each of those planets is shorter than a day here on Earth," said Livingston, lead author of the study.

6. These contribute to a small but growing list of "ultrashort-period" planets, suggesting that they could be more common than previously believed.

7. "Sixteen were in the same size class as Earth, one in particular turning out to be extremely small - about the size of Venus - which was a nice affirmation, as it's close to the limit of what is possible to detect," said Livingston.

8. Scientists hope to understand what kinds of planets might be out there, but can only draw valid conclusions if there are enough planets for robust statistical analysis.

9. The addition of a large number of new planets, therefore, leads directly to a better theoretical understanding of solar system formation, researchers said.

10. The planets also provide good targets for detailed individual studies to yield measurements of planetary composition, interior structure and atmospheres - in particular, the 18 planets in several multi-planet systems.

11. "The investigation of other solar systems can help us understand how planets and even our own solar system formed. The study of other worlds has much to teach us about our own," said Livingston.

SubQuestion No : 16

Q.16 Which of the following statements about this particular study of exoplanets may be inferred from the passage?

Question ID : 16794316017

Ans ✗ 1.

The existence of exoplanets was known to researchers but the study revealed that they may be more in number than previously suspected and that they may exhibit some surprising characteristics.

✗ 2.

The existence of exoplanets has been confirmed by the study and their characteristics have been thoroughly analysed by the research team.

✔ 3.

The existence of exoplanets and the characteristics of these planets were already known to researchers and the study only confirmed whatever information they already knew.

✘ 4.

The existence of exoplanets was not known to researchers and this study revealed this new facet of the universe to researchers.

Comprehension:

Read the given passage and answer the following questions

1. Scientists have discovered a trove of forty-four planets in solar systems beyond our own in one go, dwarfing the usual number of confirmations from extrasolar surveys.
2. The findings will improve existing models of solar systems, and may help researchers investigate exoplanet atmospheres.
3. Novel techniques developed to validate the find could accelerate the confirmation of more extrasolar planet candidates.
4. Astronomers pooled data from NASA's Kepler and the ESA's Gaia space telescopes. They confirmed the existence of these 44 exoplanets and described various details about them.
5. A portion of the findings yield some surprising characteristics. "For example, four of the planets orbit their host stars in less than 24 hours," said John Livingston, a graduate student at the University of Tokyo in Japan. "In other words, a year on each of those planets is shorter than a day here on Earth," said Livingston, lead author of the study.
6. These contribute to a small but growing list of "ultrashort-period" planets, suggesting that they could be more common than previously believed.
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9. The addition of a large number of new planets, therefore, leads directly to a better theoretical understanding of solar system formation, researchers said.
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11. "The investigation of other solar systems can help us understand how planets and even our own solar system formed. The study of other worlds has much to teach us about our own," said Livingston.

SubQuestion No : 17

Q.17 Which of the following options best paraphrases paragraph 3 of this article?

Question ID : **16794316013**

Ans ✗ 1.

New scientific techniques that have been developed could confirm the existence of other planets in other solar systems that have so far only been mere speculations.

✗ 2.

New scientific techniques that have been developed could confirm the existence of other planets in other solar systems that have already been spotted and reported on.

✗ 3.

New scientific techniques that have been developed could confirm the existence of other planets in our own solar system that has so far been believed to have only 9 planets.

✔ 4.

New scientific techniques that have already been used to confirm the existence of other planets in other solar systems could be used more extensively to confirm the existence of many more such planets.

Comprehension:

Read the given passage and answer the following questions

1. Scientists have discovered a trove of forty-four planets in solar systems beyond our own in one go, dwarfing the usual number of confirmations from extrasolar surveys.
2. The findings will improve existing models of solar systems, and may help researchers investigate exoplanet atmospheres.
3. Novel techniques developed to validate the find could accelerate the confirmation of more extrasolar planet candidates.
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11. "The investigation of other solar systems can help us understand how planets and even our own solar system formed. The study of other worlds has much to teach us about our own," said Livingston.

SubQuestion No : 18

Q.1 8 Which of the following options best explains the phrase "ultrashort period planet"?

Ans ✗ 1.

It is a planet with a very short orbit around its host star.

✗ 2.

It is a planet that revolves around its sun in less than 24 hours.

✔ 3. It is a planet that has a short span of life.

✗ 4. It is a planet that is much smaller than Venus.

Comprehension:

Read the given passage and answer the following questions

1. Scientists have discovered a trove of forty-four planets in solar systems beyond our own in one go, dwarfing the usual number of confirmations from extrasolar surveys.

2. The findings will improve existing models of solar systems, and may help researchers investigate exoplanet atmospheres.

3. Novel techniques developed to validate the find could accelerate the confirmation of more extrasolar planet candidates.

4. Astronomers pooled data from NASA's Kepler and the ESA's Gaia space telescopes. They confirmed the existence of these 44 exoplanets and described various details about them.

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11. "The investigation of other solar systems can help us understand how planets and even our own solar system formed. The study of other worlds has much to teach us about our own," said Livingston.

SubQuestion No : 19

Q.19 Which of the following statements about the research team involved in the study can be inferred from the passage?

Question ID : **16794316016**

Ans ✗ 1.

The research team had astronomers from at least three continents.

✗ 2.

The research team consisted entirely of graduate
students from the University of Tokyo.

✗ 3.

The research team collected data from America,
Europe and Asia.

✔ 4.

The research team had astronomers only from the
University of Tokyo, Japan.

Comprehension:

Read the given passage and answer the following questions

1. Scientists have discovered a trove of forty-four planets in solar systems beyond our own in one go, dwarfing the usual number of confirmations from extrasolar surveys.

2. The findings will improve existing models of solar systems, and may help researchers investigate exoplanet atmospheres.

3. Novel techniques developed to validate the find could accelerate the confirmation of more extrasolar planet candidates.

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SubQuestion No : 20

Q.2

0 Which of the following is not mentioned in the passage as one of the beneficial results of the findings?

Ans ✗ 1.
The findings will help improve the understanding of how planetary systems were formed.

✔ 2. The findings will help to understand our own planet and solar system better.

✗ 3.
The findings will help to understand the structure and composition of planets and their atmospheres.

✗ 4.
The findings will help to identify other inhabitable planets to which human beings could move.

Section : **General Hindi**

Q.1 वह निर्दोष है। वाक्य के रेखांकित पद का विलोम होता है:

Ans ✗ 1. अदोष

✗ 2. सज्जन

✗ 3. निरपराध

✔ 4. सदोष

Q.2 'वैचारिक' शब्द में प्रत्यय लगा है:

Ans ✗ 1. रिक

✔ 2. इक

✗ 3. क

✗ 4. ईक

Q.3 तद्भव शब्द कौन-सा है?

Ans ✗ 1. शुक

✗ 2. मध्य

✗ 3. प्रिय

✔ 4. प्रिया

Q.4 जिसके हृदय में प्यार नहीं है। वाक्य के रेखांकित पद का पर्यायवाची शब्द नहीं है:

Ans ✗ 1. प्रीत

✗ 2. स्नेह

✔ 3. दुलार

✗ 4. प्रेम

Q.5 कर्मवाच्य वाला वाक्य कौन-सा है?

Question ID : 16794316034

Ans ✗ 1. हम मेले में जाएंगे।

✔ 2. हमसे नहीं लिखा जाता।

✗ 3. हमसे नहीं उठा जाता।

✗ 4. चलिए, अब सो जाएं।

Q.6 'स्नेह से लिपटना' अर्थ की अभिव्यक्ति के लिए 'मुहावरा' है:

Question ID : 16794316035

Ans ✔ 1. अंक भरना

✗ 2. अँगूठा दिखाना

✗ 3. अन्न जल उठना

✗ 4. आँच न आने देना

Q.7 वह परसों स्कूल आया था। वाक्य का काल है:

Question ID : 16794316021

Ans ✗ 1. आसन्त भूत

✗ 2. अपूर्ण भूत

✗ 3. सामान्य भूत

✔ 4. पूर्ण भूत

Q.8 'अभ्युदय' शब्द में उपसर्ग है:

Question ID : 16794316025

Ans ✗ 1. अम

✗ 2. अम्य

✔ 3. आमि

✗ 4. अ

Q.9 वर्णमाला में 'ण' से पहले कौन-सा वर्ण आता है?

Question ID : 16794316019

Ans ✗ 1. ह

✗ 2. झ

✔ 3. ढ

✗ 4. घ

Q.10 कौन-सा शब्द अशुद्ध है?

Question ID : 16794316020

Ans ✗ 1. माननीय

✔ 2. पूज्यनीय

✗ 3. कल्पनीय

✗ 4. आदरणीय

Q.11 तत्सम शब्द चुनिए:

Ans ✔ 1. भक्त

✗ 2. चूल्हा

✗ 3. भात

✗ 4. तुरन्त

Q.12 युद्ध में <u>शौर्य</u> ही काम आता है। वाक्य का रेखांकित पद है:

Ans ✗ 1. विशेषण

✗ 2. क्रिया विशेषण

✔ 3. भाववाचक संज्ञा

✗ 4. सर्वनाम

Q.13 'एक काम से दूसरा काम हो जाना' के लिए लोकोक्ति कही जाती है:

Ans ✗ 1. आम के आम गुठलियों के दाम

✗ 2. नाच न जाने आँगन टेढ़ा

✔ 3. एक पंथ दो काज

✗ 4. ऊँची दुकान फीके पकवान

Q.14 साधु शब्द का बहुवचन (अविभक्तिक) होता है:

Ans ✗ 1. साधुओं

✗ 2. साधुए

✗ 3. साधुओ

✔ 4. साधु

Q.15 जिस पर विश्वास किया गया है। वाक्य के लिए एक शब्द होगा:

Ans ✗ 1. विश्वास

✗ 2. अविश्वसनीय

✔ 3. विश्वस्त

✗ 4. निर्भर

Q.16 गंगाजल शब्द में समास है:

Ans ✗ 1. अव्ययी भाव

✗ 2. द्विगु

✗ 3. द्वंद्व

✔ 4. तत्पुरुष

Q.17 शोभा <u>शाम को</u> घर आएगी। रेखांकित अंश में कारक है:

Question ID : 16794316022

Ans ✔ 1. अधिकरण

✗ 2. करण

✗ 3. कर्म

✗ 4. कर्ता

Q.18 'इत्यादि' शब्द में संधि है:

Question ID : 16794316023

Ans ✗ 1. गुण संधि

✗ 2. दीर्घ संधि

✗ 3. वृद्धि संधि

✔ 4. यण संधि

Q.19 अनुस्वार के स्थान पर 'ञ' का प्रयोग कौन-से शब्द में होगा?

Question ID : 16794316018

Ans ✔ 1. संचित

✗ 2. संगम

✗ 3. संभावना

✗ 4. संताप

Q.20 निम्नलिखित में से कौन-सा वाक्य अशुद्ध है?

Question ID : 16794316037

Ans ✔ 1. मैंने यहीं उतरना है।

✗ 2. तुम मेरे पास बैठो।

✗ 3. आज विद्यालय बंद है।

✗ 4. माता जी इधर ही आ रही हैं।

Section : **Subject Related**

Q.1 The ability of a normal human body to maintain a constant internal environment is known as?

Question ID : 16794316040

Ans ✗ 1. Peristalsis

✗ 2. Haemostasis

✔ 3. Homeostasis

✗ 4. Haematemesis

Q.2 In Genetic code, the codon AUG codes for which amino acid?

Question ID : **16794316056**

Ans ✗ 1. Lysine

✗ 2. Phenylalanine

✔ 3. Methionine

✗ 4. Glycine

Q.3 Which of the following organism is an example for Holozoic nutrition?

Question ID : **16794316038**

Ans ✗ 1. Fungi

✔ 2. Amoeba

✗ 3. Virus

✗ 4. Bacteria

Q.4 The functional impairment of the production of language or speech is known as?

Question ID : **16794316047**

Ans ✗ 1. Dyslexia

✗ 2. Agnosia

✔ 3. Aphasia

✗ 4. Ataxia

Q.5 Which of the following statement is false about certain phenomena in plants?

Question ID : **16794316048**

Ans ✗ 1.
Upward growth of plant shoots is seen in Negative Geotropism

✔ 2.
Upward growth of plant roots is seen in positive Geotropism

✗ 3.
Photosynthesis adds Oxygen to the atmosphere

✗ 4. Respiration adds CO_2 to the atmosphere

Q.6 What is the function of Wernicke's area in Human Brain?

Question ID : **16794316046**

Ans ✗ 1. Olfaction

✔ 2. Word interpretation

✗ 3. Word formation

✗ 4. Vision

Q.7 Which of the following hormone is released only in female human beings?

Question ID : **16794316054**

Ans ✗ 1. Thyroxine

✗ 2. Glucagon

✔ 3. Human Chorionic Gonadotropin

✗ 4. Adrenaline

Q.8 Which of the following is true about certain modes of asexual reproduction?

Question ID : **16794316052**

Ans ✅ 1. Regeneration is seen in Planaria

❌ 2.

Parthenogenetic off springs have haploid chromosome number

❌ 3. Budding is seen in Amoeba

❌ 4. Fertilization is seen in Parthenogenesis

Q.9 Which of the following Cranial nerve is the largest in human beings?

Question ID : **16794316045**

Ans ❌ 1. X

✅ 2. V

❌ 3. III

❌ 4. VII

Q.10 Which of the following process helps the green plants to remove excess water from them?

Question ID : **16794316042**

Ans ❌ 1. Respiration

❌ 2. Aestivation

✅ 3. Guttation

❌ 4. Photosynthesis

Q.11 Which of the following organisms have protein but lack nucleic acids in their genome?

Question ID : **16794316055**

Ans ❌ 1. Cyanobacteria

❌ 2. Bacteriophages

❌ 3. Viroids

✅ 4. Prions

Q.12 In Evolution, which of the following corresponds to the current Epoch?

Question ID : **16794316057**

Ans ✅ 1. Holocene

❌ 2. Pleistocene

❌ 3. Neocene

❌ 4. Miocene

Q.13 Which of the following gland is devoid of ducts?

Question ID : **16794316050**

Ans ❌ 1. Liver

❌ 2. Salivary gland

✅ 3. Thyroid gland

❌ 4. Pancreas

Q.14 During Aerobic Respiration, the Electron transport takes place in which cell organelle?

Question ID : **16794316039**

Ans ❌ 1. Lysosomes

✅ 2. Mitochondria

❌ 3. Golgi

❌ 4. Ribosomes

Q.15 Which of the following is a true statement among the following?

Ans ✗ 1. Liver is an Endocrine gland

✓ 2. Sebaceous gland consists of ducts

✗ 3. Pancreas has no ducts

✗ 4. Pituitary gland has several ducts

Q.16 Which of the following mammals have longest Gestation period?

Ans ✗ 1. Cow

✓ 2. Elephant

✗ 3. Rat

✗ 4. Cat

Q.17 Which of the following Vertebrates are essentially Uricotelic?

Ans ✓ 1. Aves

✗ 2. Fishes

✗ 3. Amphibians

✗ 4. Mammals

Q.18 Which of the following blood vessels supply the blood to the heart muscles?

Ans ✗ 1. Carotid arteries

✗ 2. Pulmonary arteries

✓ 3. Coronary arteries

✗ 4. Jugular veins

Q.19 Amylin is a hormone secreted by which of the following?

Ans ✗ 1. Neurohypophysis of Pituitary gland

✓ 2.
Beta cells of Islets of Langerhans of Pancreas

✗ 3.
Alpha cells of Islets of Langerhans of Pancreas

✗ 4.
Delta cells of Islets of Langerhans of Pancreas

Q.20 What is the normal range of GFR in a adult human being?

Ans ✗ 1. >250 mg/ml

✗ 2. 200-240 mg/ml

✓ 3. 90-120 mg/ml

✗ 4. 140-180 mg/ml

Section : **Subject Related**

Q.1 Which of the following causes Biomagnification in a food chain?

Ans
✗ 1. NO_2
✗ 2. SO_2
✔ 3. DDT
✗ 4. CO_2

Q.2 Which of the following harmful radiation is absorbed by the Ozone layer?

Ans
✗ 1. Gamma rays
✔ 2. UV rays
✗ 3. X rays
✗ 4. Infra-red rays

Q.3 Sunken stomata and reduced leaf size are the adaptations seen in which plants?

Ans
✔ 1. Xerophytes
✗ 2. Epiphytes
✗ 3. Hydrophytes
✗ 4. Halophytes

Q.4 Which of the following is a Conventional source of energy?

Ans
✗ 1. Sunlight
✔ 2. Coal
✗ 3. Tide
✗ 4. Wind

Q.5 Which of the following is a Nitrogen fixing bacterium?

Ans
✗ 1. Euglena
✗ 2. Chlamydomonas
✗ 3. Bacillus
✔ 4. Rhizobium

Q.6 Which of the following disease is caused due to the poisoning with Cadmium?

Ans
✗ 1. Minamata
✔ 2. Itai-itai
✗ 3. Polio
✗ 4. Rickets

Q.7 Which of the following global convention was formed to control the Ozone depletion?

Ans
✗ 1. Rotterdam convention
✔ 2. Montreal protocol

   ✗ 3. Delhi declaration

   ✗ 4. Minamata convention

Q.8 Which of the following is a Secondary consumer in a food chain?

Question ID : 16794316064

Ans   ✔ 1. Tiger

   ✗ 2. Rabbit

   ✗ 3. Green plant

   ✗ 4. Deer

Q.9 The unique, functional role of each species in an Ecosystem is known as?

Question ID : 16794316062

Ans   ✗ 1. Ecotone

   ✗ 2. Ecological balance

   ✗ 3. Ecosphere

   ✔ 4. Ecological niche

Q.10 Which of the following is a false statement?

Question ID : 16794316059

Ans   ✗ 1. Sunlight is an Abiotic factor

   ✔ 2.

Synecology involves the study of individual species

   ✗ 3.

Autecology involves the study of individual species

   ✗ 4. Bacteria are Biotic factors

Q.11 Anthrax disease in Cattle occurs due to infection with which organism?

Question ID : 16794316076

Ans   ✔ 1. Bacteria

   ✗ 2. Protozoa

   ✗ 3. Fungi

   ✗ 4. Virus

Q.12 Which of the following is known as the Edaphic factor?

Question ID : 16794316058

Ans   ✗ 1. Water

   ✗ 2. Sunlight

   ✗ 3. Temperature

   ✔ 4. Soil

Q.13 The World Environment day is observed on which date?

Question ID : 16794316074

Ans   ✔ 1. 5th June

   ✗ 2. 22nd March

   ✗ 3. 5th January

   ✗ 4. 15th October

Q.14 Which of the following pollutant is a component of Acid rains?

Ans
- ✗ 1. HCHO
- ✔ 2. H_2SO_4
- ✗ 3. $HCOO_3$
- ✗ 4. HCl

Q.15 Which of the following is a major Green House gas, which contributes to Global warming?

Ans
- ✗ 1. Sulphur
- ✔ 2. Carbon dioxide
- ✗ 3. Ozone
- ✗ 4. Nitrogen

Q.16 Which of the following global convention was formed to reduce the Greenhouse gas emissions?

Ans
- ✔ 1. Kyoto protocol
- ✗ 2. Tokyo convention
- ✗ 3. Sydney convention
- ✗ 4. Montreal protocol

Q.17 Minamata disease is caused due to which of the following pollutant?

Ans
- ✗ 1. Silver
- ✔ 2. Mercury
- ✗ 3. Cadmium
- ✗ 4. Lead

Q.18 Blue Revolution is associated with which of the following?

Ans
- ✔ 1. Aquaculture
- ✗ 2. Agriculture
- ✗ 3. Vermiculture
- ✗ 4. Sericulture

Q.19 Ozone layer is present in which region of Atmosphere?

Ans
- ✗ 1. Troposphere
- ✗ 2. Exosphere
- ✔ 3. Stratosphere
- ✗ 4. Ionosphere

Q.20 Bird flu is caused due to which Virus?

Ans
- ✔ 1. H5N1
- ✗ 2. H1N1
- ✗ 3. HCV

Section : Subject Related
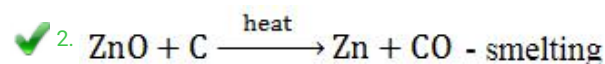
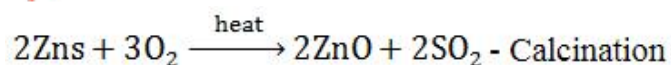**Q.1** Non-iron ore among the following is:

Question ID : **16794316091**

Ans ✔ 1. Chalcocite

✗ 2. Limonite
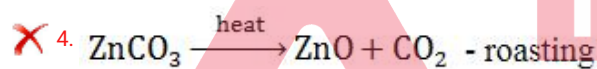
✗ 3. Iron pyrite

✗ 4. Siderite

Q.2 Identify the Correct match from the given options.

Question ID : **16794316092**

Ans ✗ 1.

$$2Zns + 3O_2 \xrightarrow{heat} 2ZnO + 2SO_2 \text{ - Calcination}$$

✔ 2. $ZnO + C \xrightarrow{heat} Zn + CO$ - smelting

✗ 3.

$$Nacl(fused) \xrightarrow{electrolysis} Na \quad + \quad \frac{1}{2}cl_2$$

(at anodes)   *(at cathodes)*

✗ 4. $ZnCO_3 \xrightarrow{heat} ZnO + CO_2$ - roasting
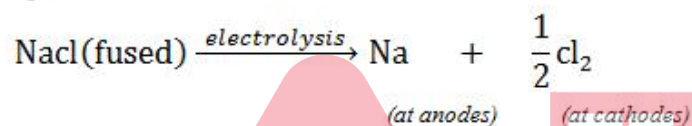
Q.3 Which of the following electronic configuration of an element does not belong to the same family as others?

Question ID : **16794316082**

Ans ✗ 1. $[Ar]3d^{10}4s^1$

✗ 2. $[Xe]4f^{14}5d^{10}6s^1$

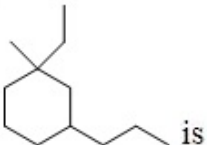✗ 3. $[Kr]4d^{10}5s^1$

✔ 4. $[Ar]3d^{10}4s^24p^5$

Q.4 Total number of atoms present in CO_2 if one litre of air contains 0.03% volume of CO_2 at STP is:

Question ID : **16794316080**

Ans ✗ 1. 8×10^{18}

✗ 2. 5.4×10^{19}

✗ 3. 24×10^{19}

✔ 4. 2.4×10^{19}

Q.5

Question ID : **16794316096**

IUPAC name of [structure] is

Ans ✗ 1. 3-ethyl 3-methyl 1-propyl cyclohexane

✔ 2. 1-ethyl 1-methyl 3-propyl cyclohexane

✗ 3. 1-ethyl 1-methyl 5-propyl cyclohexane

✗ 4. 5-ethyl 5-methyl 1-propyl cyclohexane

Q.6 When a beam of light enters in a dark room, the dust particles in its path become clearly visible. This is due to:

Question ID : **16794316079**

Ans

✗ 1. Brownian movement

✔ 2. Tyndall effect

✗ 3. Electrophoresis

✗ 4. Coagulation

Q.7 Methane can be prepared by:

Question ID : **16794316097**

Ans

✗ 1. Kolbe's electrolytic method

✗ 2. Hydrogenation of alkenes

✔ 3. Hydrolysis of Grignard's reagent

✗ 4. Wurtz reaction

Q.8 Lewis acid cannot be:

Question ID : **16794316087**

Ans

✗ 1. Ligands

✗ 2. Anions

✗ 3.
Neutral molecule contain at least one lone pair of electrons

✔ 4. Cations

Q.9 The age of ancient idol is estimated by:
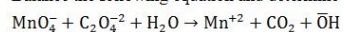
Question ID : **16794316081**

Ans

✗ 1. Actinium-Lead method

✗ 2. Radio carbon dating method

✔ 3. Uranium-lead method

✗ 4. Thorium-Lead method

Q.10 Balance the following equation and determine the coefficients of Mn^{+2}, CO_2 and $\overline{O}H$ respectively.
$MnO_4^- + C_2O_4^{-2} + H_2O \rightarrow Mn^{+2} + CO_2 + \overline{O}H$

Question ID : **16794316089**

Ans

✗ 1. 2, 16, 10

✗ 2. 10, 2, 16

✗ 3. 16, 2, 10

✔ 4. 2, 10, 16

Q.11 Correct decreasing electron gain enthalpy with negative sign for the elements F, O, S, Cl is:

Question ID : **16794316084**

Ans

✗ 1. F>Cl>O>S

✗ 2. F>O>Cl>S

✔ 3. Cl>F>S>O

✗ 4. Cl>S>F>O

Q.12 The value of Rydberg's Constant for helium atom is:

Question ID : **16794316083**

Ans

❌ 1. $109677 \times 2 \ cm^{-1}$

✔️ 2. $109677 \times 4 \ cm^{-1}$

❌ 3. $\dfrac{109677}{4} cm^{-1}$

❌ 4. $109677 \ cm^{-1}$

Q.13 The type of interactions present between sulphate ion and iodine molecule is:

Question ID : **16794316078**

Ans ❌ 1. Ion-dipole

❌ 2. Dipole-dipole

❌ 3. Dipole-induced dipole

✔️ 4. Ion-induced dipole

Q.14 Mendeleev placed the elements Cu & Ag along with:

Question ID : **16794316085**

Ans ❌ 1. Sc & y

✔️ 2. K & Rb

❌ 3. Ca & Sr

❌ 4. B & Al

Q.15 A solution of 10^{-5}M NaOH is diluted by 1000 times. The pH of diluted solution would be:

Question ID : **16794316088**

Ans ❌ 1. 8

✔️ 2. 7.05

❌ 3. 6.95

❌ 4. 9

Q.16 Which among the following is not a disproportionation reaction?

Question ID : **16794316090**

Ans ❌ 1. $Cl_2 + 2\overline{O}H \rightarrow ClO^- + Cl^- + H_2O$

✔️ 2. $2Na_2S_2O_3 + I_2 \rightarrow 2NaI + Na_2S_4O_6$

❌ 3. $P_4 + 3\overline{O}H + 3H_2O \rightarrow pH_3 + 3H_2PO_2^-$

❌ 4. $2H_2O_2 \rightarrow 2H_2O + O_2$

Q.17 Corrosion is a:

Question ID : **16794316093**

Ans ❌ 1.
Natural, non-spontaneous, redox, deterioration of metal

✔️ 2.
Natural, spontaneous, electrochemical, oxidative deterioration of metal

❌ 3.
Artificial, non-spontaneous, reductive deterioration of metal

❌ 4.
Artificial, electrochemical, spontaneous, oxidative deterioration of metal

---

Q.18 Maximum number of isomers possible for $C_2H_2Cl_2$ is:

Question ID : **16794316095**

Ans

✗ 1. 4
✗ 2. 2
✗ 3. 1
✔ 4. 3

Q.19 The number of sp^2 hybridised, sp hybridized carbon atoms present in the molecule Non 1, 2, 4, 5 - tetra ene 7- yne are:

Question ID : **16794316094**

Ans
✗ 1. $sp^2 = 4, sp = 2$

✗ 2. $sp^2 = 6, sp = 2$

✔ 3. $sp^2 = 4, sp = 4$

✗ 4. $sp^2 = 4, sp = 3$

Q.20 Which of the following ion does not give conjugate base?

Question ID : **16794316086**

Ans
✗ 1. $H_2PO_3^-$

✗ 2. HPO_4^{-2}

✗ 3. $H_2PO_4^-$

✔ 4. $H_2PO_2^-$

Section : **Subject Related**

Q.1 A convex lens of focal length 30 cm and a concave lens of focal length 5 cm are placed in contact with each other. Find the effective focal length of the combination.

Question ID : **16794316109**

Ans
✗ 1. 6 cm convex

✗ 2. 25 cm convex

✗ 3. 35 cm concave

✔ 4. 6 cm concave

Q.2 Important parameter of water for aquatic life is:

Question ID : **16794316100**

Ans
✔ 1. Dissolved oxygen

✗ 2. eutrophication

✗ 3. Bio Amplification

✗ 4. Biological oxygen demand

Q.3 Which of the following options gives the Iodoform test?

Question ID : **16794316098**

Ans
✔ 1. C_2H_5OH

✗ 2. $C_2H_5COC_2H_5$

✗ 3. CH_3OH

✗ 4. CH_3COOH

Q.4 The refractive index of material of prism is 1.5 and angle of prism is 6°. If a light ray passes through this prism find the angle of deviation produced.

Question ID : **16794316112**

Ans
✗ 1. 2°

Q.5 The refractive index of a material of glass is 1.5. Find the time taken by a light ray to travel 5 m distance in glass slab. Speed of light in Vacuum $C = 3 \times 10^8$ m/s

Question ID : **16794316110**

Ans

✗ 1. 25 sec

✔ 2. 25×10^{-9} sec

✗ 3. $\dfrac{3}{5} \times 10^{-6}$ sec

✗ 4. $\dfrac{25}{3} \times 10^{-8}$ sec

Q.6 The word 'Ceramic' stands for:

Question ID : **16794316102**

Ans

✔ 1. Burnt material

✗ 2. Nonmetallic, glazing material

✗ 3. Brittle, nonmetallic material

✗ 4. Metallic, Crystalline material

Q.7 Two identical bulbs (100 v, 100 w) are connected in series and across the series combination 100 v is applied. Find the power dissipated by each bulb.

Question ID : **16794316104**

Ans

✔ 1. 25 w

✗ 2. 100 w

✗ 3. 50 w

✗ 4. 200 w

Q.8 The force acting on a body charges with time as shown. The mass of the body is 2 kg and it starts from rest. Find its velocity at $t = 10 \sec$.
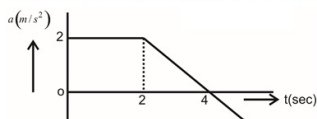
Question ID : **16794316117**
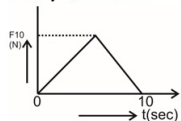
Ans

✗ 1. 50 m/s

✗ 2. 10 m/s

✔ 3. 25 m/s

✗ 4. 20 m/s

Q.9 A body starts from rest and acceleration changes with time as shown. Find the time at which the body stops again.

Question ID : **16794316115**

Ans

✔ 1. $(4 + 2\sqrt{3})s$

✗ 2. $8\,s$

✗ 3. $(2 + \sqrt{3})s$

✗ 4. $(4 + \sqrt{3})s$

Q.10 A particle starts from rest and moving with uniform acceleration and attains velocity 20 m/s after travelling some distance. Find its velocity at mid-point of the journey distance.

Ans ✗ 1. 20 m/s

✗ 2. 10 m/s

✗ 3. 5 m/s

✔ 4. $10\sqrt{2}$ m/s

Q.11 The radius of curvature of a concave mirror is 20 cm. An object is placed at a distance of 15 cm from the mirror. Find the distance between the object and image formed.

Ans ✗ 1. 10 cm

✗ 2. 30 cm

✔ 3. 15 cm

✗ 4. 5 cm

Q.12 The velocity of a particle changing with position X as $v = (2X^2 + X)$ m/s. Find its acceleration at X = 0.1 m

Ans ✗ 1. Zero

✗ 2. 0.3 m/s^2

✔ 3. 0.168 m/s^2

✗ 4. 1.67 m/s^2

Q.13 Handles of pressure cookers are made of:

Ans ✗ 1. Polypropene

✗ 2. Urea formaldehyde

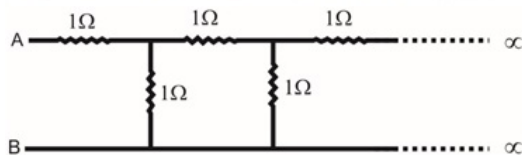✗ 3. High density polyethene

✔ 4. Bakelite

Q.14 Refractive index of a glass slab is $\sqrt{2}$. A light ray is incident on this glass slab with an angle of incidence 60°. Find the angle of deviation of produced.

Ans ✗ 1. 120°

✗ 2. 90°

✗ 3. 15°

✔ 4. 60°

Q.15 In The given circuit find the effective resistance between A and B

Ans

✗ 1. $\left(\dfrac{\sqrt{3}-1}{4}\right)\Omega$

✗ 2. $\left(\dfrac{\sqrt{5}-1}{2}\right)\Omega$

✗ 3. 2Ω

✓ 4. $\dfrac{(\sqrt{5}+1)}{2}\Omega$

Q.16 A ball of mass 100g hits a wall with a speed of 10 m/s normal to the wall and rebounds normally with a speed of 6 m/s. The interaction time is 0.1s. Find the force exerted by ball on the wall.
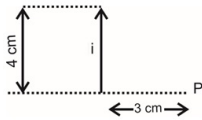
Ans ✓ 1. 16 N

✗ 2. 160 N

✗ 3. 1.6 N

✗ 4. 3.2 N

Q.17 A wire of length 4 cm is carrying 1 amp current as shown. Find the magnetic field induction at the point P shown in the figure.

Ans ✓ 1. $\dfrac{4}{15}\times10^{-5}$ T

✗ 2. 4×10^{-5} T

✗ 3. $\dfrac{3}{5}\times10^{-5}$ T

✗ 4. $\dfrac{4}{5}\times10^{-5}$ T

Q.18 In an L-C-R series circuit the voltages across inductor, capacitor and resistor are 50 v, 20 v and 40 v respectively. Find the e.m.f applied across the L-C-R series combination

Ans ✓ 1. 50 V

✗ 2. 70 V

✗ 3. 100 V

✗ 4. 110 V

Q.19 Structure of carbon fiber is similar to:

Ans ✗ 1. Carborundum

✓ 2. Graphite

✗ 3. Diamond

✗ 4. Fullerene

Q.20 A coil of area 2 cm^2 having 100 turns is placed in a magnetic field which is changing with time as 0.2 T/s. The plane of the coil is perpendicular to the field. Find the e.m.f induced in the coil.

Ans ✓ 1. 4 mV

✗ 2. 4V

✗ 3. 0.4 mV

✗ 4. 4μV

Q.1 The velocity of sound in air depends on the absolute temperature as $v \propto T^x$, then x is equal to:

Question ID : **16794316126**

Ans

✗ 1. 1

✗ 2. $\dfrac{1}{4}$

✔ 3. $\dfrac{1}{2}$

✗ 4. 2

Q.2 An ice berg of volume 1 m³ is floating on the surface of water. Density of ice is 0.9 gr/m³ and density of water is 1 gr/cm³. Find the mass of the stone that should be placed on the ice berg so that it just sinks completely.

Question ID : **16794316123**

Ans

✗ 1. 10 gr

✗ 2. 100 gr

✔ 3. 100 kg

✗ 4. 10 kg

Q.3 An open tank is filled with water to a height of 1m. Find the pressure at
An open tank is filled with water to a height of 1m. Find the pressure at
the bottom or the tank.

$1atm = 1 \times 10^5 \, pa, \ g = 10 \, m/s^2$ and density of water $1 \times 10^3 \, kg/m^3$

Question ID : **16794316124**

Ans

✗ 1. $2 \times 10^5 \, pa$

✗ 2. $0.1 \times 10^5 \, pa$

✔ 3. $1.1 \times 10^5 \, pa$

✗ 4. $1 \times 10^3 \, pa$

Q.4 A man standing at certain distance from a big fort wall fires a bullet and listens the echo after 2 seconds. Now the man walks 85 m towards the wall and fires another bullet and listens its echo after 1.5 seconds. Find the speed of sound in air

Question ID : **16794316125**

Ans

✗ 1. $330 \, m/s$

✗ 2. $300 \, m/s$

✔ 3. $340 \, m/s$

✗ 4. $170 \, m/s$

Q.5 A body is projected vertically upwards with a velocity u. Find its speed when it is at half of the maximum height.

Question ID : **16794316120**

Ans

✗ 1. $\dfrac{u}{2}$

✔ 2. $\dfrac{u}{\sqrt{2}}$

✗ 3. $\dfrac{u}{4}$

✗ 4. $\dfrac{u}{2\sqrt{2}}$

Q.6 Mass of a circular ring is M and its radius is R. Find the gravitational potential at the centre of the ring.

Ans ✗ 1. Zero

✗ 2. $\dfrac{-2GM}{R}$

✗ 3. $\dfrac{-GM}{2R}$

✔ 4. $\dfrac{-GM}{R}$

Q.7 Two point masses m and 4m are separated by a distance d. Find the distance of null point from m.

Ans ✗ 1. $\dfrac{d}{2}$

✗ 2. $\dfrac{2d}{3}$

✔ 3. $\dfrac{d}{3}$

✗ 4. $\dfrac{d}{4}$

Q.8 Two liquids of densities d_1 and d_2 are mixed in equal volume. Find the density of the mixture.

Ans ✗ 1. $\dfrac{2d_1 d_2}{d_1 + d_2}$

✔ 2. $\dfrac{d_1 + d_2}{2}$

✗ 3. $\dfrac{d_2 d_1}{d_2 + d_1}$

✗ 4. $\dfrac{d_1 d_2}{d_1 + d_2}$

Q.9 A shell (at rest) of mass m explodes in to three pieces whose masses are in the ratio of 1:1:2. The two pieces of equal masses move in mutually perpendicular directions each with a speed v. Find the energy released in this process.

Ans ✗ 1. $\dfrac{9}{32} mv^2$

✗ 2. mv^2

✔ 3. $\dfrac{3}{8} mv^2$

✗ 4. $\dfrac{1}{2} mv^2$

Q.10 A uniform rod of mass m and length l is suspended vertically from a rigid support. The rod is lifted such that it makes an angle 60° with vertical. Find the work done in lifting the rod.

Ans ✗ 1. mgl

✔ 2. $\dfrac{mgl}{4}$

$\times$ 3. $\dfrac{mgl}{8}$

$\times$ 4. $\dfrac{mgl}{2}$

Q.11 An inclusive learning environment is the one that is designed typically for:

Question ID : **16794316137**

Ans

$\times$ 1. The specific disability

✓ 2. That grade and age group of learners

$\times$ 3. The students with special educational needs

$\times$ 4. The specified targets

Q.12 As per the secondary commission report (1952) recommending elasticity in the curriculum, relates to which principle of curriculum development?

Question ID : **16794316136**

Ans

$\times$ 1. Principle of future orientation

$\times$ 2. Principle of correlation

$\times$ 3. Principle of leisure

✓ 4. Principle of flexibility

Q.13 "Mathematics is a system of logical processes and conclusions are derived from certain fundamental assumptions". Which of the following best describes this feature of mathematics, as stated by Mario Pieri?

Question ID : **16794316133**

Ans

$\times$ 1. Assumptive - inductive system

$\times$ 2. Hypothetico - inductive system

$\times$ 3. Assumptive - conclusion system

✓ 4. Hypothetico - deductive system

Q.14 Teacher has come prepared with colours, brush, easel and old magazines. Which form of art would she probably incorporate into the lesson?

Question ID : **16794316135**

Ans

$\times$ 1. Theatre

✓ 2. Visual

$\times$ 3. Performing

$\times$ 4. Music and Dance

Q.15 Maternal mortality refers to:

Question ID : **16794316132**

Ans

✓ 1.

Death of the mother at the time of child birth

$\times$ 2. Death of child in the womb

$\times$ 3.

Death of both mother and child at the time of child birth

$\times$ 4. Death of child at the time of birth

Q.16 Choose the right answer from the list below.

One of the national objectives of education relevant to socio-economic problems and emphasized by Indian Education Commission (1964-66) is:

Question ID : **16794316129**

Ans

$\times$ 1. Early childhood education

❌ 2. Including art in education

✅ 3. Increasing productivity

❌ 4. Science education

Q.17 Choose the best option from the following.

When a child applies the knowledge of addition learnt through beads on addition with sticks the learning transferred to as referred to as:

Ans

❌ 1. Vertical transfer

❌ 2. Negative transfer

✅ 3. Lateral transfer

❌ 4. Zero transfer

Q.18 "School Readiness" which is an important component in the ICDS Early Childhood Care and Education initiative, hold its roots in the Law of Readiness proposed by which of the following learning theories?

Ans

❌ 1. Information processing model of learning

❌ 2. Trial and error learning method

✅ 3. Thorndike's Laws of learning

❌ 4. Gestalt's theory

Q.19 More concepts per sentence and paragraph than any other are found in text of which of these subjects?

Ans

❌ 1. Political science

❌ 2. Social studies

❌ 3. History

✅ 4. Mathematics

Q.20 Interdisciplinary scientific study of the atmosphere is called:

Ans

❌ 1. Geology

❌ 2. Sociology

✅ 3. Meteorology

❌ 4. Theology