Bihar
PRT

Previous Year Paper
24 Aug, 2023 Shift 1

16/PV/M–2023–02

Booklet Series

Candidate's Roll Number

A

Serial No.

Question Booklet

GENERAL STUDIES

Paper—2

| Time Allowed : 2 Hours | | Maximum Marks : 120 |

Read the following instructions carefully before you begin to answer the questions.

IMPORTANT INSTRUCTIONS

1. This Question Booklet contains **120** questions in all.

2. **All** questions carry equal marks.

3. **Immediately after commencement of the examination, you should check up your Question Booklet and ensure that the Question Booklet Series is printed on the top right-hand corner of the Booklet. Please check that the Booklet contains 48 printed pages including four pages (Page Nos. 44 to 47) for Rough Work and no page or question is missing or unprinted or torn or repeated. If you find any defect in this Booklet, get it replaced immediately by a complete Booklet of the same series.**

4. You must write your Roll Number in the space provided on the top of this page. Do not write anything else on the Question Booklet.

5. An Answer Sheet will be supplied to you separately by the Invigilator to mark the answers. **You must write your Name, Roll Number, Question Booklet Series and other particulars in the space provided on Page–1 of the Answer Sheet provided, failing which your Answer Sheet will not be evaluated.**

6. You should encode your **Roll Number** and the **Question Booklet Series A, B, C or D** as it is printed on the top right-hand corner of the Question Booklet with Black/Blue ink ballpoint pen in the space provided on **Page–2** of your Answer Sheet. **If you do not encode or fail to encode the correct series of your Question Booklet, your Answer Sheet will not be evaluated correctly.**

7. Questions and their responses are printed in English and Hindi versions in this Booklet. Each question comprises of **five** responses—(A), (B), (C), (D) and (E) . You are to select ONLY ONE correct response and mark it in your Answer Sheet. Your total marks will depend on the number of correct responses marked by you in the Answer Sheet.

8. In the Answer Sheet, there are **five** circles— Ⓐ, Ⓑ, Ⓒ, Ⓓ and Ⓔ against each question. To answer the questions, you are to mark with Black/Blue ink ballpoint pen ONLY ONE circle of your choice for each question. Select only one response for each question and mark it in your Answer Sheet. If you mark more than one Answer for one question, the answer will be treated as wrong. **Use Black/Blue ink ballpoint pen only to mark the answer in the Answer Sheet. Any erasure or change is not allowed.**

9. If there is any sort of mistake either of printing or of factual nature, then out of English and Hindi versions of the questions, the English version will be treated as standard.

10. For each question for which a wrong answer has been given by the candidates, **one-fourth** of the marks assigned to that question will be deducted as penalty.

11. You should not remove or tear off any sheet from the Question Booklet. You are not allowed to take this Question Booklet and the Answer Sheet out of the Examination Hall during the examination. **After the examination has concluded, you must hand over your Answer Sheet to the Invigilator.** Thereafter, you are permitted to take away the Question Booklet with you.

12. Failure to comply with any of the above instructions will render you liable to such action or penalty as the Commission may decide at their discretion.

13. Candidates must assure before leaving the Examination Hall that their Answer Sheets will be kept in Self Adhesive LDPE Bag and completely packed/sealed in their presence.

ध्यान दें : अनुदेशों का हिन्दी रूपान्तर इस पुस्तिका के अन्तिम पृष्ठ पर छपा है।

1. If $\sqrt{\left(1 + \dfrac{27}{169}\right)} = \left(1 + \dfrac{x}{13}\right)$, then the value of x is

(A) 1

(B) $-\dfrac{14}{13}$

(C) -27

(D) More than one of the above

(E) None of the above

2. The radius of a solid sphere of some metal is 3 cm. How long a wire of diameter 4 mm can be drawn from it?

(A) 8·8 m

(B) 9 m

(C) 9·1 m

(D) More than one of the above

(E) None of the above

3. On selling 30 chairs, a furniture seller gets a loss equal to selling price of 6 chairs. His loss percent is

(A) 16

(B) $16\dfrac{1}{3}$

(C) $16\dfrac{2}{3}$

(D) More than one of the above

(E) None of the above

4. The product of the digits of a two-digit number is 36. If 45 is subtracted from the number, then the digits interchange mutually. The number is

(A) 84

(B) 73

(C) 49

(D) More than one of the above

(E) None of the above

5. If $a + b + c = 0$, then what is the value of $\dfrac{a^2}{bc} + \dfrac{b^2}{ca} + \dfrac{c^2}{ab}$?

(A) 1

(B) 2

(C) 3

(D) More than one of the above

(E) None of the above

6. The solution of $4^{x+1} + 4^{1-x} = 10$ is

(A) $-\dfrac{1}{2}$

(B) $\dfrac{1}{2}$

(C) 0

(D) More than one of the above

(E) None of the above

7. On dividing $x^3 - 3x^2 + x + 2$ by a polynomial $g(x)$, the quotient and remainder are $(x^2 - x + 1)$ and $(-2x + 4)$ respectively. Then $g(x)$ is

(A) $x - 2$

(B) $x^2 + x + 1$

(C) $x^2 - 1$

(D) More than one of the above

(E) None of the above

8. A toy is in the form of a cone mounted on a hemisphere of diameter 7 cm. The total height of the toy is 14·5 cm. Then the volume of the toy is $\left(\pi = \dfrac{22}{7} \right)$

(A) $231 \, \text{cm}^3$

(B) $331 \, \text{cm}^3$

(C) $131 \, \text{cm}^3$

(D) More than one of the above

(E) None of the above

9. In a club, all the members participate either in Tambola or in Rummy. 320 participate in Rummy, 350 participate in Tambola and 220 participate in both. How many members does the club have?

(A) 440

(B) 445

(C) 450

(D) More than one of the above

(E) None of the above

10. The sum of the reciprocals of A's ages (in years) 2 years ago and 2 years from now is $\dfrac{2}{3}$. The present age of A is

(A) 5 years

(B) 7 years

(C) 4 years

(D) More than one of the above

(E) None of the above

11. For what value of k, the system of equations

$x - ky = 2$ and $3x + 2y = -5$

has a unique solution?

(A) $-\dfrac{2}{3}$

(B) 1

(C) 2

(D) More than one of the above

(E) None of the above

12. The radius of a circle is 14 cm and the area of a sector is 102.7 cm^2. The central angle of the sector is

(A) 30°

(B) 60°

(C) 45°

(D) More than one of the above

(E) None of the above

13. What is the compound interest of ₹ 15,625 for 9 months when the rate of interest is 16% per annum and the interest is payable quarterly?

(A) ₹ 1,961

(B) ₹ 1,951

(C) ₹ 2,051

(D) More than one of the above

(E) None of the above

14. If the product of the roots of the equation $3kx^2 - 25kx + k + 8 = 0$ is 3, then k is

(A) 1

(B) 4

(C) 3

(D) More than one of the above

(E) None of the above

15. The value of $\log_{\sqrt{2}}(32)$ is

(A) $\dfrac{5}{2}$

(B) 5

(C) 10

(D) More than one of the above

(E) None of the above

16. The altitude of a right-angled triangle is 6 cm less than its base. If the hypotenuse is $\sqrt{218}$ cm, the other two sides (in cm) are

(A) 5 and 11

(B) 9 and 15

(C) 10 and 16

(D) More than one of the above

(E) None of the above

17. Which instrument is used for measuring electric potential?

(A) Potentiometer

(B) Galvanometer

(C) Voltmeter

(D) More than one of the above

(E) None of the above

18. Magnetic field is a

(A) scalar quantity

(B) vector quantity

(C) dimensionless quantity

(D) More than one of the above

(E) None of the above

19. A man pushes more weight on the Earth at

(A) sitting position

(B) standing position

(C) lying position

(D) More than one of the above

(E) None of the above

20. The coloured light that refracts most while passing through a prism is

(A) yellow

(B) violet

(C) blue

(D) More than one of the above

(E) None of the above

21. A piece of ice is dropped in a vessel containing kerosene oil. When ice melts, the level of kerosene oil will

(A) rise

(B) fall

(C) remain same

(D) More than one of the above

(E) None of the above

22. The pH of which of the following is more than 7?

(A) Gastric juice

(B) Blood plasma

(C) Vinegar

(D) More than one of the above

(E) None of the above

23. The focal length of normal eye lens is about

(A) 1 mm

(B) 25 cm

(C) 2 cm

(D) More than one of the above

(E) None of the above

24. Which substance is formed by the action of chlorine gas on dry slaked lime?

(A) Calcium chloride

(B) Bleaching powder

(C) Hydrochloric acid

(D) More than one of the above

(E) None of the above

25. The process where the characteristics are transmitted from parents to offsprings is called

(A) variation

(B) heredity

(C) gene

(D) More than one of the above

(E) None of the above

26. The point to be kept in mind for verification of Ohm's law is

(A) ammeter and voltmeter should be connected in series

(B) ammeter should be connected in series and voltmeter in parallel

(C) ammeter should be connected in parallel and voltmeter in series

(D) More than one of the above

(E) None of the above

27. What happens when dilute hydrochloric acid is added to iron filings?

(A) Hydrogen gas and iron chloride are produced

(B) Chlorine gas and iron hydroxide are produced

(C) No reaction takes place

(D) More than one of the above

(E) None of the above

28. The best method to prevent flood is

(A) grazing

(B) afforestation

(C) deforestation

(D) More than one of the above

(E) None of the above

29. Food cans are coated with tin and not with zinc because

(A) zinc is costlier than tin

(B) zinc has a higher melting point than tin

(C) zinc is more reactive than tin

(D) More than one of the above

(E) None of the above

30. Which of the functions is performed by the ovaries?

(A) Formation of ovum

(B) Secretion of progesterone

(C) Secretion of estrogen

(D) More than one of the above

(E) None of the above

31. Which acid is present in tamarind?

(A) Methanoic acid

(B) Tartaric acid

(C) Lactic acid

(D) More than one of the above

(E) None of the above

32. Coliforms are

(A) bacteria present in the digestive tract of animals

(B) bacteria present in hot springs

(C) bacteria present in frigid environment

(D) More than one of the above

(E) None of the above

33. What is the name of the architect in charge of the new building of the Parliament of India?

(A) Arun Goel

(B) Padma Shri Bimal Patel

(C) Anoop Rai

(D) More than one of the above

(E) None of the above

34. What was effectively the percentage of the electorate of the adult population of India that could only participate in the election of the members of the Constituent Assembly?

(A) 10 to 15 percent

(B) 20 to 25 percent

(C) 30 to 35 percent

(D) More than one of the above

(E) None of the above

35. Which State, in April 2023, gave the OBC status to transgenders community?

(A) Tamil Nadu

(B) Madhya Pradesh

(C) Rajasthan

(D) More than one of the above

(E) None of the above

36. Ibn Battuta, the famous Muslim explorer who came to India during the regime of Muhammad Bin Tughlaq, belonged to which country?

(A) Afghanistan

(B) Morocco

(C) Iraq

(D) More than one of the above

(E) None of the above

37. Recently, India's first cable-stayed rail bridge is built in

(A) Himachal Pradesh

(B) Uttar Pradesh

(C) Jammu and Kashmir

(D) More than one of the above

(E) None of the above

38. India's first semiconductor manufacturing plant will be set up in which State?

(A) Gujarat

(B) Rajasthan

(C) Bihar

(D) More than one of the above

(E) None of the above

39. Who was behind the first known attempt on Gandhi's life in India during the Champaran Satyagraha in 1917?

(A) Dr. Grant

(B) H. S. Pollock

(C) Erwin

(D) More than one of the above

(E) None of the above

40. Which of the following countries is the member of the recently formed 'I2U2 Grouping'?

(A) India

(B) Israel

(C) UAE

(D) More than one of the above

(E) None of the above

41. On March 17, 2023, the International Criminal Court (ICC) issued arrest warrant against

(A) Russian President Vladimir Putin

(B) US President Joe Biden

(C) Chinese President Xi Jinping

(D) More than one of the above

(E) None of the above

42. The third Forum for India-Pacific Islands Cooperation (FIPIC) Summit was held in

(A) Papua New Guinea

(B) Namibia

(C) Brazil

(D) More than one of the above

(E) None of the above

43. Rowan Wilson has been appointed as the first black Chief Judge of which city?

(A) Washington

(B) Chicago

(C) New York

(D) More than one of the above

(E) None of the above

44. A Parliamentary Committee of which of the following countries recently recommended that India should be made part of the 'NATO Plus' Grouping?

(A) UK

(B) USA

(C) Germany

(D) More than one of the above

(E) None of the above

45. The International Booker Prize, 2023 has been awarded to

(A) Georgi Gospodinov

(B) Margaret Atwood

(C) Aravind Adiga

(D) More than one of the above

(E) None of the above

46. Who is the new Chief Executive Officer (CEO) of Twitter?

(A) Elon Musk

(B) Linda Yaccarino

(C) Parag Agrawal

(D) More than one of the above

(E) None of the above

47. According to 2011 Census of India, what was the total female literacy rate in Bihar?

(A) 52·89%

(B) 63·68%

(C) 53·57%

(D) More than one of the above

(E) None of the above

48. Subhadra Devi, who has been awarded Padma Shri in 2023, is a known

(A) architect

(B) space scientist

(C) Papier-mâché massy artist

(D) More than one of the above

(E) None of the above

49. Which of the following trees is worshipped by Mundas and Santhals of Chota Nagpur region?

(A) Tamarind

(B) Mango

(C) Kadamba

(D) More than one of the above

(E) None of the above

50. Which of the following is grown during the Zaid season?

(A) Muskmelon

(B) Cucumber

(C) Watermelon

(D) More than one of the above

(E) None of the above

51. Which of the following statements is true regarding earthquakes?

(A) P-waves are transverse waves.

(B) The place on the surface above focus is called epicentre.

(C) Studying animal behaviour is one of the methods of prediction of earthquakes adopted by local people.

(D) More than one of the above

(E) None of the above

52. Which of the following statements about Lake Superior of North America continent is true?

(A) It is world's greatest salt-water lakes group.

(B) It forms a geographical boundary between Canada and USA.

(C) It makes approximately 1700 km boundary between the two countries.

(D) More than one of the above

(E) None of the above

53. Which planet is considered as the Earth's twin planet due to similarity in shape and size?

(A) Mars

(B) Jupiter

(C) Venus

(D) More than one of the above

(E) None of the above

54. Which of the following countries forms a part of Amazon River basin?

(A) Argentina

(B) Chile

(C) Venezuela

(D) More than one of the above

(E) None of the above

55. Which of the following options is the correct sequence of layers of atmosphere starting from the Earth's surface?

(A) Troposphere → Stratosphere → Mesosphere → Thermosphere → Exosphere

(B) Troposphere → Mesosphere → Stratosphere → Thermosphere → Exosphere

(C) Troposphere → Mesosphere → Thermosphere → Stratosphere → Exosphere

(D) More than one of the above

(E) None of the above

56. The correct pair of local name of shifting agriculture and related country is

(A) Chena—Bangladesh

(B) Milpa—Rhodesia (Zimbabwe)

(C) Ladang—Malaysia

(D) More than one of the above

(E) None of the above

57. What would be the time at 30° East of Greenwich, if it is 12 noon at Greenwich?

(A) 2 p.m.

(B) 1 p.m.

(C) 10 a.m.

(D) More than one of the above

(E) None of the above

58. What are the main mineral constituents of the oceanic crust?

(A) Silica and alumina

(B) Silica and nickel

(C) Silica and magnesium

(D) More than one of the above

(E) None of the above

59. Which of the following explains the term 'mulching'?

(A) Covering the bare ground between crops with a layer of organic matter like straw

(B) Covering the contours with stones, grass, etc.

(C) Cropping along terraces made on steep slopes

(D) More than one of the above

(E) None of the above

60. The correct pair of Indian petroleum producing area and its location is

(A) Surma Valley—Assam

(B) Lunej Area—Gujarat

(C) KG Basin—Bay of Bengal

(D) More than one of the above

(E) None of the above

61. Who was the Labour Minister in Jawaharlal Nehru's Provisional Government?

(A) Aruna Asaf Ali

(B) C. Rajagopalachari

(C) Jagjivan Ram

(D) More than one of the above

(E) None of the above

62. In which month of 1918 was the 'Champaran Agrarian Act' passed against the European indigo planters?

(A) February

(B) May

(C) November

(D) More than one of the above

(E) None of the above

63. Which one of the following statements is correct?

(A) *A Bunch of Old Letters* was written by Dr. Rajendra Prasad.

(B) Brahma Dutt was the second Satyagrahi in the Individual Satyagraha.

(C) *The Indian Struggle* was written by Subhas Chandra Bose.

(D) More than one of the above

(E) None of the above

64. Which tribe of Bihar attended Gaya Session of Congress?

(A) Oraon

(B) Santhal

(C) Sannyasi

(D) More than one of the above

(E) None of the above

65. Which of the following pairs is *not* correctly matched?

(A) *Advocate of India*— Dadabhai Naoroji

(B) *Young India*— Mahatma Gandhi

(C) *Indian Spectator*— Surendranath Banerjee

(D) More than one of the above

(E) None of the above

66. Under whose Chairmanship was the National Planning Committee set up in 1938?

(A) Dr. Rajendra Prasad

(B) Subhas Chandra Bose

(C) Jawaharlal Nehru

(D) More than one of the above

(E) None of the above

67. Who was the author of the book, *Mahatma Gandhi and Bihar : Some Reminiscences*?

(A) Syed Ali Zaheer

(B) Dr. Rajendra Prasad

(C) Jivatram Bhagwandas Kripalani

(D) More than one of the above

(E) None of the above

68. Under the influence of which revolution, the people of Bihar denied to pay 'Chaukidari Tax'?

(A) Non-Cooperation Movement

(B) Civil Disobedience Movement

(C) Quit India Movement

(D) More than one of the above

(E) None of the above

69. The female freedom fighter popularly known as the 'Grand Old Lady' of the Independence Movement was

(A) Aruna Asaf Ali

(B) Gulab Kaur

(C) Bishni Devi Shah

(D) More than one of the above

(E) None of the above

70. At which place, B. G. Tilak organized 'Home Rule League' in 1916?

(A) Poona

(B) Bombay

(C) Nagpur

(D) More than one of the above

(E) None of the above

71. Who was related to the publishing of a weekly Hindi journal, *Hunkar*?

(A) Yamuna Karjee

(B) Rahul Sankrityayan

(C) Sahajanand Saraswati

(D) More than one of the above

(E) None of the above

72. Which English General showed tribute to Rani of Jhansi saying that "Here lay the woman who was the only man among the rebels"?

(A) Hugh Rose

(B) Campbell

(C) Hudson

(D) More than one of the above

(E) None of the above

73. Match List–I with List–II and select the correct answer using the codes given below the Lists :

List—I (Names of Slogans)	List—II (Related Political Parties/Politicians)
a. Garibi Hatao	1. Left Front
b. Save Democracy	2. Indira Congress
c. Land to the Tiller	3. Janata Party
d. Protect the Self-respect of Telugus	4. N. T. Rama Rao

Codes :

(A)

a	b	c	d
2	1	3	4

(B)

a	b	c	d
2	3	1	4

(C)

a	b	c	d
1	4	3	2

(D) More than one of the above

(E) None of the above

74. Which of the following was formed under the influence of Russian Revolution and USSR?

(A) The Communist Party of Great Britain

(B) The Conference of the Peoples of the East (1920)

(C) The Comintern

(D) More than one of the above

(E) None of the above

75. Who said, "The basic cause of problems facing Bharat is the neglect of its national identity"?

(A) Deen Dayal Upadhyay

(B) Keshav Baliram Hedgewar

(C) Madhav Sadashiv Golwalkar

(D) More than one of the above

(E) None of the above

76. Which of the following was the major demand of peasants participating in Non-Cooperation Movement?

(A) Reduction of revenue

(B) Abolition of beggar

(C) Open the entry of peasants in the forest areas to graze their cattles, collect fuel wood and fruits

(D) More than one of the above

(E) None of the above

77. Montesquieu proposed a division of powers within the government between legislature, executive and judiciary in which of the following books by him?

(A) *The Spirit of the Laws*

(B) *My Thoughts*

(C) *Lettres Persanes*

(D) More than one of the above

(E) None of the above

78. Which of the following was the main cause of deforestation during the British rule in India?
- (A) To meet the demand of sleepers on the railway tracks and supply of timbers for the Royal Navy
- (B) To meet the demand of planned forests and plantation of tea and coffee
- (C) To improve land to meet the demand of expanded cultivation
- (D) More than one of the above
- (E) None of the above

79. Which organization of India has the motto, "Dharmo Rakshati Rakshitah (law protects when it is protected)"?
- (A) The Research and Analysis Wing
- (B) The Indian Army
- (C) The Indian Supreme Court
- (D) More than one of the above
- (E) None of the above

80. Which of the following movements was led and successful under the leadership of Sardar Vallabhbhai Patel?
- (A) Satyagraha in support of Khadi peasants, Gujarat
- (B) Satyagraha of workers of cotton mills, Ahmedabad, Gujarat
- (C) Satyagraha of Bardoli, Gujarat
- (D) More than one of the above
- (E) None of the above

81. With reference to India and Great Depression started in 1929, which of the following statements is correct?
- (A) The depression adversely affected Indian trade.
- (B) The depression adversely affected Indian peasants, farmers, export and import.
- (C) The impact of depression on India indicates that how integrated the global economy had become by early 20th century.
- (D) More than one of the above
- (E) None of the above

82. The validity of the order of the Government of India of 13th August, 1990, for the reservation to socially and educationally backward classes, was decided in which of the following years?
- (A) 1991
- (B) 1992
- (C) 1993
- (D) More than one of the above
- (E) None of the above

83. As per Angus Maddison's book, *The World Economy* : *Historical Statistics*, what was the contribution of Bharat (India), in percentage, in world GDP (PPP) during ancient times?
- (A) 32%
- (B) 20%
- (C) 12%
- (D) More than one of the above
- (E) None of the above

84. Match List–I with List–II and select the correct answer using the codes given below the Lists :

List—I	List—II
(Names of the Acts for the welfare of women in India)	(Related years of the Acts)
a. The Special Marriage Act	1. 1976
b. The Dowry Prohibition Act	2. 1954
c. The Equal Remuneration Act	3. 1986
d. The Indecent Representation of Women (Prohibition) Act	4. 1961

Codes :

(A) a   b   c   d
       2   4   1   3

(B) a   b   c   d
       3   1   2   4

(C) a   b   c   d
       4   2   3   1

(D) More than one of the above

(E) None of the above

85. Which of the following basic values was accepted by all leaders much before the Constituent Assembly met to deliberate on the Constitution of India?

(A) The Universal Adult Franchise

(B) The Right of Freedom and Equality

(C) The Protection of Rights of Minorities

(D) More than one of the above

(E) None of the above

86. Who wrote the book, *The Beautiful Tree : Indigenous Indian Education in the Eighteenth Century*?

(A) Dharampal

(B) Tilak

(C) Gandhi

(D) More than one of the above

(E) None of the above

87. Which of the following is assured mainly by the 'fraternity' in the Preamble of the Constitution of India?

(A) The dignity of the individual

(B) The unity and integrity of the nation

(C) The justice, liberty and equality of the citizens

(D) More than one of the above

(E) None of the above

88. Who among the following said, "Indian judiciary suffers from luxurious litigation"?

(A) Dipak Misra

(B) Ranjan Gogoi

(C) N. V. Ramana

(D) More than one of the above

(E) None of the above

89. Which one of the following is *not* a gaseous biogeochemical cycle in ecosystem?

(A) Phosphorus cycle

(B) Oxygen cycle

(C) Nitrogen cycle

(D) More than one of the above

(E) None of the above

90. Which of the following organisms convert inorganic substances into organic compounds using sunlight in the presence of chlorophyll?

(A) Autotrophs

(B) Certain bacteria

(C) Animals

(D) More than one of the above

(E) None of the above

91. Which of the following has higher energy level and shorter wavelength?

(A) Infrared radiation

(B) Ultraviolet radiation

(C) Visible radiation

(D) More than one of the above

(E) None of the above

92. The process of progressive chemical accumulation of non-degradable chemicals at each trophic level is known as

(A) biological magnification

(B) morphological magnification

(C) thermogenic magnification

(D) More than one of the above

(E) None of the above

93. The carrying capacity of a population is determined by its

(A) population growth rate

(B) natality

(C) limiting resources

(D) More than one of the above

(E) None of the above

94. Methaemoglobinaemia is caused by the drinking of water contaminated with

(A) nitrate

(B) cadmium

(C) phosphate

(D) More than one of the above

(E) None of the above

95. The flow of energy in an ecosystem is

(A) multidirectional

(B) unidirectional

(C) tridirectional

(D) More than one of the above

(E) None of the above

96. Which of the following are constituents of an ecosystem?

(A) Animals

(B) Plants

(C) Microorganisms

(D) More than one of the above

(E) None of the above

97. Which of the following gases is produced from landfills?

(A) Sulphur dioxide

(B) Methane

(C) Liquefied petroleum gas

(D) More than one of the above

(E) None of the above

98. Which of the following represent the food chain in a forest?

(A) Plants, deer, lion

(B) Plants, frog, snake

(C) Plants, weeds, fish

(D) More than one of the above

(E) None of the above

99. In the environment, plastics will not be decomposed by the action of

(A) bacteria

(B) saprophyte

(C) parasite

(D) More than one of the above

(E) None of the above

100. Energy sources that do not increase carbon emissions include

(A) solar cells

(B) windmills

(C) nuclear power plants

(D) More than one of the above

(E) None of the above

101. Branching series in a food chain is called

(A) food system

(B) food level

(C) food web

(D) More than one of the above

(E) None of the above

102. The green plants capture _____ of the sunlight energy and convert it into food energy.

(A) 5%

(B) 2%

(C) 1%

(D) More than one of the above

(E) None of the above

103. The Chipko Movement was strengthened under the leadership of

(A) Amrita Devi Bishnoi

(B) Medha Patkar

(C) Sunderlal Bahuguna

(D) More than one of the above

(E) None of the above

104. _____ are present in the first trophic level in the food chain.

(A) Autotrophs

(B) Primary consumers

(C) Tertiary consumers

(D) More than one of the above

(E) None of the above

105. Arrange the following fractions in ascending order :

$$\frac{13}{18}, \ \frac{29}{36}, \ \frac{41}{45}, \ \frac{51}{60}$$

(A) $\dfrac{13}{18} < \dfrac{29}{36} < \dfrac{51}{60} < \dfrac{41}{45}$
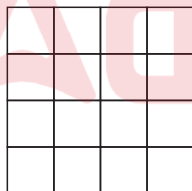
(B) $\dfrac{13}{18} < \dfrac{51}{60} < \dfrac{29}{36} < \dfrac{41}{45}$

(C) $\dfrac{51}{60} < \dfrac{41}{45} < \dfrac{29}{36} < \dfrac{13}{18}$

(D) More than one of the above

(E) None of the above

106. How many squares are there in the given figure?

(A) 25

(B) 30

(C) 32

(D) More than one of the above

(E) None of the above

107. A man fills a basket with eggs in such a way that the number of eggs added on each successive day is the same as the number already present in the basket. This way the basket gets completely filled in 24 days. After how many days, the basket was one-fourth full?

(A) 6

(B) 12

(C) 22

(D) More than one of the above

(E) None of the above

108. The sum of two numbers is 480. If the bigger number is decreased by 2% and the smaller number is increased by 10%, then the numbers obtained are equal. The larger number is approximately

(A) $\dfrac{3320}{13}$

(B) $\dfrac{3300}{13}$

(C) $\dfrac{3120}{13}$

(D) More than one of the above

(E) None of the above

109. The next number in the finite sequence

486, 324, 216, 144, ...

is

(A) 96

(B) 76

(C) 36

(D) More than one of the above

(E) None of the above

110. Which number should replace '?' in the following series?

240, 120, ? , 180, 360, 900

(A) 120

(B) 130

(C) 150

(D) More than one of the above

(E) None of the above

111. The term in the blank

_____ : FICTION :: GRIND : BMDIY

is

(A) LOIZOUT

(B) KNHYNTS

(C) IMGXMSR

(D) More than one of the above

(E) None of the above

112. There are 5 routes to go from Prayagraj to Patna and 4 routes to go from Patna to Kolkata. How many ways are possible for going from Prayagraj to Kolkata via Patna?

(A) 45

(B) 20

(C) 54

(D) More than one of the above

(E) None of the above

113. Select the most suitable statement.

(A) Every circle is an ellipse.

(B) No circle is hyperbola.

(C) Every square is a rectangle.

(D) More than one of the above

(E) None of the above

114. The word CODE is coded as 15161991 and STEP is coded as 18769122. Then SPOTE is coded as

(A) 1822761691

(B) 1822167691

(C) 1816227691

(D) More than one of the above

(E) None of the above

115. The area of a circle is $40\pi^2$. The area of a square with sides equal to radius of the circle is

(A) 4π

(B) $4\pi^2$

(C) 40π

(D) More than one of the above

(E) None of the above

116. Select the odd word in the group :

Book, Paper, Pencil, Pen, Eraser

(A) Book

(B) Pencil

(C) Eraser

(D) More than one of the above

(E) None of the above

117. If in English alphabet, A = 1, D = 2, P = 4, then which of the following denotes 3?

(A) H

(B) I

(C) J

(D) More than one of the above

(E) None of the above

118. Two numbers are in the ratio 21:10. If their HCF is 11, then the sum of the numbers is

(A) 341

(B) 141

(C) 241

(D) More than one of the above

(E) None of the above

119. A profit of 10% is made when a smartphone is sold at P rupees and there is 4% loss when the smartphone is sold at Q rupees. Then $P:Q$ is

(A) 55:48

(B) 45:34

(C) 110:96

(D) More than one of the above

(E) None of the above

120. In how many different ways can the letters of the word EDUCATION be arranged so that the vowels come together?

(A) 7200

(B) 14400

(C) 12100

(D) More than one of the above

(E) None of the above

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