

PAPER - I

Note : There are **fifty (50)** questions. The questions carry **two (2)** marks each.

1. **Assertion (Ass) :** The reservation of 33 per cent of seats for women in Parliament and State Legislature Assembly does not require Constitutional Amendment.

Reason (R) : Political parties contesting election can allocate 33 per cent of seats they contest to women candidates without any Constitutional Amendment.

In the context of the above statements which one of the following is correct ?

- (A) Both (Ass) and (R) are true and (R) is the correct explanation of (Ass).
- (B) Both (Ass) and (R) are true, but (R) is not the correct explanation of (Ass).
- (C) (Ass) is true but (R) is false.
- (D) (Ass) is false but (R) is true.

Number of students passed in the annual examination of a certain secondary school are given below :

Class	Students Passed	
	Boys	Girls
Class V	80	60
Class VI	80	70
Class VII	40	60
Class VIII	90	60
Class IX	70	80
Class X	70	60

Answer the questions (Question No. 2 to Question No. 6) given below :

2. In which class is the difference between the results of boys and girls maximum ?
- (A) Class V
 - (B) Class VI
 - (C) Class VIII
 - (D) Class IX

3. In which class is the result of boys less than average result of the girls ?

- (A) Class VI
- (B) Class VII
- (C) Class IX
- (D) Class X

4. In which pair of classes are the results of girls and boys in inverse ratio ?

- (A) Class VI and Class IX
- (B) Class VI and Class X
- (C) Class VII and Class IX
- (D) Class VII and Class X

5. In which class is the result of girls more than the average result of the boys ?

- (A) Class VI
- (B) Class VII
- (C) Class VIII
- (D) Class IX

6. In which classes are the total number of students passed identical ?

- (A) Class V, Class VII, Class IX
- (B) Class VI, Class VIII, Class IX
- (C) Class VI, Class IX, Class X
- (D) Class VIII, Class IX, Class X

7. The word cybernetics was first used by

- (A) Norbert Wiener
- (B) Claude E. Shannon
- (C) Warren Weaver Model
- (D) Aristotle

8. 'Fly ash' produced in thermal power plants is an eco-friendly resource for use in —

- (a) agriculture as micro-nutrient
- (b) wasteland development
- (c) dam and water holding structures
- (d) brick industry

Choose the correct answer from the code given below :

- (A) (a), (b), and (d) only
- (B) (b), (c), and (d) only
- (C) (a), (c), and (d) only
- (D) (a), (b), (c) and (d)

9. In the two sets given below Set-I indicates methods of teaching and Set-II provides the basic requirements for success/effectiveness.

Match the two sets and indicate your answer by choosing from the codes :

Set-I (Method of teaching)	Set-II (Basic requirements for success/effectiveness)
(a) Lecturing	(i) Small step presentation with feedback provided
(b) Discussion in groups	(ii) Production of large number of Ideas
(c) Brainstorming	(iii) Use of teaching aids procedure
(d) Programmed Instruction	(iv) Content delivery in a lucid language
	(v) Theme based instruction among participants

Codes	(a)	(b)	(c)	(d)
(A)	(i)	(ii)	(v)	(iv)
~~(B)~~	(v)	(iii)	(ii)	(i)
(C)	(ii)	(iv)	(iii)	(v)
(D)	(iii)	(ii)	(i)	(iv)

10. It is an online course aimed at unlimited participation and open access via the Web. It is

- (A) Mass-oriented open course
 (B) Massive open online course
 (C) Mass-oriented online course
 (D) Mass online open course

11. The Government of India conducts census after every 10 years. The method of research in this process is —

- (A) case study
 (B) experimental
 (C) developmental
 (D) survey

12. Match List I with List II and select the correct answer from the codes given below :

List-I	List-II
1. cf.	(i) below
2. et al.	(ii) approximately
3. op. cit.	(iii) in the same place
4. ibid.	(iv) compare
	(v) the same
	(vi) in the work cited
	(vii) and others
	(viii) in the place cited

Codes	1	2	3	4
(A)	(iv)	(vii)	(vi)	(iii)
(B)	(i)	(v)	(vi)	(iii)
(C)	(ii)	(v)	(viii)	(iv)
(D)	(iv)	(v)	(viii)	(iii)

13. Match List I with List II and select the correct answer from the codes given below :

List-I

1. R. K. Laxman
2. K. S. Pillai
3. Keshav
4. E. P. Unny

List-II

- (i) The Statesman
- (ii) The Indian Express
- (iii) The Hindu
- (iv) The Tribune
- (v) Shankar's Weekly
- (vi) The Telegraph
- (vii) The Times of India

Codes	1	2	3	4
(A)	(vii)	(iv)	(v)	(ii)
(B)	(iv)	(v)	(vi)	(i)
(C)	(vi)	(v)	(ii)	(iv)
(D)	(vii)	(v)	(iii)	(ii)

14. Communication refers to dialogic relations or face-to-face verbal communication between two people involving their mutual ideas, thought, behaviour, ideals, likes, dislikes and the queries and answers concerning life and living in general.

The appropriate word in the box is

- (A) Intrapersonal
- (B) Dyadic
- (C) Group
- (D) Mass

15. A man sold two items at ₹ 5000 each, one at a gain of 20%, and the other at a loss of 20%. What was his loss or gain per cent ?

- (A) No change
- (B) 4% loss
- (C) 4% gain
- (D) 1% gain

16. Following incomplete sequence is presented. Find out the number which should come at the place of question mark which will complete the sequence.

4 16 36 64 ?

- (A) 400
- (B) 300
- (C) 200
- (D) 100

17. If the proposition "Vegetarians are not meat eaters" is false, then which of the following inferences is correct ?

Choose from the codes given below :

1. "Some vegetarians are meat eaters" is true
2. "All vegetarians are meat eaters" is doubtful
3. "Some vegetarians are not meat eaters" is true
4. "Some vegetarians are not meat eaters" is doubtful

- (A) 1, 2, and 3
- (B) 2, 3, and 4
- (C) 1, 3, and 4
- (D) 1, 2, and 4

18. TV Channel launched for covering only Engineering and Technology subjects is known as

- (A) Gyan Darshan
- (B) Vyas
- (C) Eklavya
- (D) Kisan

19. Unsolicited, usually commercial messages (such as emails, text messages, or internet postings), sent to a large number of recipients or posted in a large number of places, are called :

- (A) Backbone
- (B) Newsgroup
- (C) Spam
- (D) Usenet

20. The Vihara of Vikramashila was established by

- (A) the emperor Dharmapala
- (B) Gautamiputra Satakarni
- (C) the emperor Ashoka
- (D) Vasudeva Kanva

21. Full form of SNTP is

- (A) Simple Network Time Program
- (B) Simple National Time Program
- (C) Simple National Time Protocol
- (D) Simple Network Time Protocol

22. It is believed that our globe is warming progressively. This global warming will eventually result in

- (A) increase in availability of usable land
- (B) fall in the sea level
- (C) uniformity of climate at equators and poles
- (D) melting of polar ice

23. A mangrove is a shrub or small tree that grows

- (A) in coastal saline or brackish water
- (B) in the deserts of Rajasthan
- (C) in the Himalayas
- (D) in Arunachal Pradesh

24. Which of the following best explains teaching models?

- (A) Learning models
- (B) Instructional models
- (C) Teacher models
- (D) Learner interactions

25. research relies on experience or observation alone, often without due regard for system and theory. It is a data-based research.

The appropriate word in the box is

- (A) Applied
- (B) Empirical
- (C) Fundamental
- (D) Qualitative

26. Which one of the following is not a barrier to effective communication?

- (A) Noise
- (B) Unclear Graphics
- (C) Inattention
- (D) Location

27. The simple interest on ₹6000 for the period from 4 February, 2022 to 17 April, 2022 at 12.5 per cent per annum interest is

- (A) ₹143.75
- (B) ₹144.75
- (C) ₹150
- (D) ₹152.75

28. There are major types of Hetvabhasa.

The correct number in the box is

- (A) five
- (B) four
- (C) three
- (D) two

29. Given below are two statements :

Statement-I : Cache memory is faster than random access memory.

Statement-II : Random access memory is closer to processor than cache memory.

In light of the above statements, choose the most appropriate answer from the options given below —

- (A) Both Statement-I and Statement-II are correct.
- (B) Both Statement-I and Statement-II are incorrect.
- (C) Statement-I correct and Statement-II is incorrect.
- (D) Statement-I is incorrect and Statement-II is correct.

30. Decibel is the unit for

- (A) intensity of heat
- (B) intensity of sound
- (C) radio wave frequency
- (D) speed of light

31. The lower most layer of the atmosphere which is closest to the surface of the earth is known as

- (A) exosphere
- (B) mesosphere
- (C) stratosphere
- (D) troposphere

32. The treatise *Brihajjatakam* was written by

- (A) Aryabhata
- (B) Baudhayana
- (C) Brahmagupta
- (D) Varahamihira

33. Geometry, in ancient India, was discussed in

- (A) the *Arthashastra*
- (B) the *Caraka-Samhita*
- (C) the *Sulvasutras*
- (D) the *Susruta-Samhita*

34. Right to Education Act — 2009, covers children of the age group—

- (A) 3 to 18 Yrs.
- (B) 5 to 18 Yrs.
- (C) 5 to 14 Yrs.
- (D) 6 to 14 Yrs.

35. Under the New Education Policy, 2020, the 10+2 structure of school curricula is to be replaced by a

(A) 5+3+3+4

(B) 4+4+4+3

(C) 3+3+3+3

(D) 4+3+4+3

Curricular structure corresponding to ages 3–8, 8–11, 11–14 and 14–18 years respectively.

36. Pupils/students differ greatly in their susceptibility to anger due to heredity, health status, environment and the way they are dealt with by the adults. As a teacher, how will you try to direct attention of the students towards something else?

(A) They must be taught how to express anger so as to avoid disapproval

(B) Anger should be used in a socially acceptable channel

(C) Grown-up children should be taught a problem solving behaviour in coping with situations that provoke anger

(D) All of the above

37. Why should a student not be punished severely?

(A) He may quarrel with a teacher

(B) He may leave the school and join another

(C) Parent of the student may quarrel with the teacher

(D) The student may develop a negative attitude towards his studies, teacher, and school

38. There are two sets given below, Set-I specifies the types of research, while Set-II indicates their characteristics. Match the two and give your answer by selecting the correct code :

Set-I (Research types)	Set-II (Characteristics)
(a) Fundamental Research	(i) Finding out the extent of perceived impact of an intervention
(b) Applied Research	(ii) Developing an explanation through theory building
(c) Action Research	(iii) Improving an existing situation through use of interventions
(d) Evaluative Research	(iv) Exploring the possibility of a theory for use in various situations
	(v) Theme based interaction among participants

Codes	(a)	(b)	(c)	(d)
(A)	(ii)	(iv)	(iii)	(i)
(B)	(v)	(iv)	(iii)	(ii)
(C)	(i)	(ii)	(iii)	(iv)
(D)	(ii)	(iii)	(iv)	(v)

39. Match List I with List II, and select the correct answer from the codes given below :

List I**List II**

- | | |
|--|------------------------|
| 1. The Indian Institute of Science | (i) Tirupati |
| 2. Indian Association for the Cultivation of Science | (ii) Arunachal Pradesh |
| 3. Bhandarkar Oriental Research Institute | (iii) Pune |
| 4. Central Institute of Himalayan Culture Studies | (iv) Bengaluru |
| | (v) Sikkim |
| | (vi) Uttarakhand |
| | (vii) Ahmedabad |
| | (viii) New Delhi |
| | (ix) Kolkata |

Codes

- | | | | | |
|-----|--------|-------|--------|-------|
| | 1 | 2 | 3 | 4 |
| (A) | (viii) | (i) | (iii) | (v) |
| (B) | (ix) | (vii) | (viii) | (v) |
| (C) | (iv) | (ix) | (iii) | (ii) |
| (D) | (iv) | (vi) | (i) | (vii) |

40. A statistical measure based upon the entire population is called parameter while measure based upon a sample is known as —

- (A) either Epistemology or Oncology
(B) sample parameter
(C) inference
(D) statistic

41. *The Man Who Knew Infinity* is a 2015 British biographical drama film based on the 1991 book of the same name by Robert Kanigel. It is about the

- (A) Indian scientist Sir C. V. Raman
(B) British mathematician Godfrey Harold Hardy
(C) The physicist George Gamow of *One Two Three Infinity* fame
(D) Indian mathematician Srinivasa Ramanujan

42. 1.2% of 5 litres =

- (A) 0.06 cm^3
(B) 6 cm^3
(C) 60 cm^3
(D) 600 cm^3

43. If $a : b = 8 : 15$, $b : c = 5 : 8$, $c : d = 4 : 5$, then $a : d$ is

- (A) 15 : 4
(B) 5 : 4
(C) 8 : 4
(D) 4 : 15

Read the passage below and answer Questions 44 to 48 :

I adore animals but live in a small unit, so I had little choice when choosing a pet for company. After reading some articles about birds and what good company they can be, I decided to get a budgerigar.

Pepsi is a show bird and quite big but when I first brought him home, he was very timid and scared. So, I spoke to him for a few minutes and assured him everything would be fine. Eventually, Pepsi approached me and we have been flatmates and best friends ever since.

He is very intelligent and learning one word at a time. He is now able to string a sentence together, such as "Who is the gorgeous, precious, special boy in the mirror?" When I am cleaning the unit and his cage, he says it is "nice and clean." He seems to notice when I am down and asks, "What's the matter?" When he sees me getting ready to go out he asks, "Where are you going?"

I look forward to coming home from work and miss him when I am away. When I come home Pepsi tells me he has missed me, too. We are one happy, little family.

44. The meaning of the word unit in the passage is

- (A) a standard measure of a quantity
- (B) the number one
- (C) a single apartment in a bigger building
- (D) an organised group comprising people and / or equipment

45. Budgerigar is a

- (A) small long-tailed, seed-eating bird also known as the common parakeet or shell parakeet
- (B) small to medium-sized passerine bird in the family Fringillidae
- (C) domesticated form of the wild canary, a small songbird in the finch family originating from the Macaronesian Islands
- (D) small passerine bird in the family passeridae

46. What kind of pet did the author decide to keep ?

- (A) He wanted to keep a cat
- (B) He decided to keep a rabbit
- ☒ (C) He kept a show bird
- (D) He did not keep a pet

47. What kind of behaviour did Pepsi first exhibit ?

- (A) He was very friendly
- (B) He was very talkative
- (C) He was naughty and messed up a lot
- ☒ (D) He was timid and scared

48. Which of the following is correct about Pepsi ?

- (A) He is an aggressive bird
- ☒ (B) He is an intelligent bird
- (C) He is a dumb bird who is always scared
- (D) He is a very ill tempered bird

49. Name the project which has connected all the police stations of the country in one network with utmost secrecy from general people.

(A) POLCOM

(B) POLNET

(C) TOLNET

(D) IPOLCOM

50. It refers to the Pramana of non-perception which consists in the presentative knowledge of negative facts.

(A) Upamana

(B) Shabda

(C) Arthapatti

(D) Anupalabddhi