

SAMPLE PAPER IE

ENGLISH

SENTENCE COMPLETION

1. I have no desire _____ name or fame.
 - A. on
 - B. upon
 - C. for
 - D. in

2. He is too miserly to part _____ money.
 - A. at
 - B. on
 - C. to
 - D. by

3. _____ for over six hours, I began to lose feeling in my right hand.
 - A. Have written
 - B. Having written
 - C. Had written
 - D. Has written

ANTONYMS

4. **BOOST:**
 - A. damage
 - B. obstruct
 - C. encourage
 - D. rebuilt

5. **COMIC:**
 - A. painful
 - B. fearful
 - C. tragic
 - D. emotional

6. SPURIOUS:

- A. false
- B. genuine
- C. sample
- D. systematic

ANALOGIES

7. PIPE : WATER

- A. bottle: wine
- B. artery: paint
- C. vein: blood
- D. nozzle: hose

8. CAST : ACTOR

- A. drama: protagonist
- B. statue: sculptor
- C. script: author
- D. orchestra: musician

9. ANGER : FEELING

- A. man: woman
- B. table: book
- C. sister: sibling
- D. liar: thief

SYNONYM

10. MEDIOCRE:

- A. average
- B. bitter
- C. industrial
- D. agriculture

11. STATIONARY:

- A. odorless
- B. motionless
- C. tasteless
- D. colorless

12. FACILITIES:

- A. evils
- B. prayers
- C. disagreements
- D. services

COMPREHENSION

Read the following passage and answer the Questions from 13 to 17.

A great scholar recognized that, while all men should have equal opportunity, all did not have the same capacity. Some had the ability to earn more than others. But he believed that those who had talent would be performing the work of society if they used their talent wisely and well. He said that he would allow a man of intellect to earn more and not suppress his talent. But it was his view that the bulk of his larger earnings should go to the common fund. Those with talent and opportunity would find their fulfillment as trustees. He extended this concept of trusteeship to cover all fields of life.

13. The scholar mentioned in the passage never believed in:

- A. social equality
- B. equality of opportunities
- C. political equality
- D. complete equality in all respects

14. The scholar's trusteeship concept is:

- A. a philosophy
- B. applicable to social life only
- C. applicable to all fields of life
- D. irrelevant today

15. According to him, one can serve the society:

- A. if one is talented
- B. if one used his talent wisely
- C. if one earned well
- D. if one worked honestly

16. The passage primarily discusses the scholar's:

- A. Character
- B. Views
- C. Services
- D. Personality

17. He believed that a man of intellect should:

- A. earn as much as he needs
- B. earn for others, not for himself
- C. earn more and not suppress his talent
- D. live on charity

ANALYTICAL REASONING

Information that is published is part of the public record. But information that a reporter collects and sources that he contacts, must be protected in order for our free press to function free of fear.

18. The above argument is most severely weakened by which one of the following statements?

- A. Public information is usually reliable
- B. Undocumented evidence may be used to convict an innocent person
- C. Members of the press act ethically in most cases
- D. The sources that a reporter contacts are usually willing to divulge their identity

Read the following passage and answer the Questions from 19 to 21.

Six furniture items Chair, Table, Cupboard, Sofa, Bed and Carpet are being placed in rooms, each of which can accommodate two furniture items and no more than two. Each furniture item must be placed to exactly one room and must be placed to that room either alone or else together with one of the other six furniture items. Enough rooms are available to permit any possible assignment of furniture items to rooms, but the following restrictions must be observed:

**Table cannot be placed in a room with Cupboard.
Cupboard cannot be placed in a room with Sofa.
Bed and Carpet must be placed in a room together.**

19. Which of the following pairs of furniture items can be placed in one room together?

- A. Chair and Carpet
- B. Cupboard and Sofa
- C. Bed and Table
- D. Chair and Sofa

20. If Cupboard is placed in a room alone, which of the following must be true?

- A. Table is placed in a room alone.
- B. The furniture items occupy either 4 or 5 rooms.
- C. The furniture items occupy either 3 or 6 rooms.
- D. None other than Cupboard is placed in a room alone.

21. If Bed and Carpet are the only furniture items placed in a room, how many rooms are the minimum that can accommodate the furniture items?

- A. 4
- B. 5
- C. 2
- D. 3

QUANTITATIVE

22. 120 men had food for 200 days. If 30 men leave due to an epidemic. The remaining food will last for:

- A. 150 days
- B. 245
- C. 260 days
- D. $266\frac{2}{3}$ days

23. What is the sum of 1st three prime numbers?

- A. 10
- B. 9
- C. 8
- D. 6

24. If $a : b = 3 : 5$ and $a : c = 5 : 7$, what is the value of $b : c$?

- A. $3 : 7$
- B. $21 : 35$
- C. $21 : 25$
- D. $25 : 21$

25. If $r = -2$ and $s = 5$, what is the value of $r^2(2r + s)$?

- A. -36
- B. -28
- C. -4
- D. 4

26. If $a = 3(2c^2 + 3c + 4)$ then what is the value of “a” when “c” = -1?

- A. 1
- B. 3
- C. 6
- D. 9

27. If $2x + 4 = b$, then $6x + 12 = ?$

- A. $b + 3$
- B. $b + 12$
- C. $3b$
- D. $3b + 3$

28. What will be the perimeter of a circle of 56 cm diameter?

- A. 176 cm
- B. 144 cm
- C. 88 cm
- D. 204 cm

29. What is the perimeter of a rectangle that is twice as long as it is wide and has the area 128 m^2 ?

- A. 8 m
- B. 16 m
- C. 32 m
- D. 48 m

PHYSICS

30. The vertical component of acceleration of a projectile:

- A. is less than the gravitational acceleration
- B. is equal to the gravitational acceleration
- C. is more than the gravitational acceleration
- D. has no relation with the gravitational acceleration

31. Torque depends on:

- A. Force and speed
- B. Force and moment arm
- C. Velocity and time
- D. Force and time

32. A raindrop of mass m is falling vertically through the air with a steady speed v . The raindrop experiences a retarding force kv due to the air, where k is a constant. The acceleration of free fall is g . Which expression gives the kinetic energy of the raindrop?

- A. mg/k
- B. $mg^2/2k^2$
- C. m^3g^2/k^2
- D. $m^3g^2/2k^2$

CHEMISTRY

33. Aqueous solutions of barium chloride and sodium sulphate react to form _____, an insoluble white solid.

- A. **$BaSO_4(s)$**
- B. **$Na_2SO_4(s)$**
- C. **$BaCl_2(s)$**
- D. **$NaCl(s)$**

34. Which of the following metals is most reactive?

- A. Sodium, Na
- B. Copper, Cu
- C. Gold, Au
- D. Chlorine, Cl

35. Ethanol is much more soluble in water than is ethyl ethanoate. Which one of the following statements correctly accounts for this?

- A. Ethanol is a polar molecule, but ethyl ethanoate is non-polar.
- B. Ethanol is a non-polar molecule, but ethyl ethanoate is polar.
- C. A hydrogen bond forms between the hydrogen of the -OH group in ethanol and the oxygen of a water molecule.
- D. A hydrogen bond forms between the hydrogen of the -OH group in ethanol and the hydrogen of a water molecule.

MATHS

36. Let $\mathbf{A} = \begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$. The determinant of the adjoint of A is

- A. 4
- B. 2
- C. 0
- D. -2

37. $\int \frac{\sec^2 x}{\tan x} dx + \int \frac{\operatorname{cosec}^2 x}{\cot x} dx = ?$

- A. $\ln \tan x + c$
- B. $\ln \cot x + c$
- C. $2 \ln \cot x + c$
- D. $2 \ln \tan x + c$

38. $\lim_{x \rightarrow 1} \sqrt{1-x} = ?$

- A. 0
- B. 1
- C. -1
- D. Does not exist

Q. No.	Ans. Key
1	C
2	D
3	B
4	A
5	C
6	B
7	C
8	D
9	C
10	A
11	B
12	D
13	D
14	C
15	B
16	B
17	B
18	B
19	D
20	B
21	B
22	D
23	D
24	D
25	D
26	D
27	C
28	A
29	D
30	B
31	B
32	D
33	A
34	A
35	C
36	D
37	C
38	D