

Section - ENGLISH

This section contains 30 Multiple Choice Questions. Each question has four choices (a), (b), (c) and (d) out of which ONLY ONE is correct.

1. Select the answer choice that identifies the noun in the sentence.

Sue's parents tried living in the north, but they could not adapt to the cold.

- a) north
- b) but
- c) not
- d) adopt

2. What is the missing pronoun?

The children are coming out of school in a minute. I need to go and pick _____ up.

- a) it
- b) her
- c) them
- d) they

3. Choose the correct order of adjectives to fill the blank.

She is a _____ supermodel.

- a) Beautiful slim Brazilian
- b) Brazilian beautiful slim
- c) Slim Brazilian beautiful
- d) Brazilian slim beautiful

4. Which kind of adverb is the word in capitals? "Mothers look GENTLY at their babies."

a) Adverb of Manner

c) Adverb of Place

5. Choose the right option to fill the gap.

b) Adverb of Time/Frequency

d) Adverb of Degree

When Pooja arrives, I _____ in my apartment.

a) Will be sleeping,

c) Be sleeping

6. Choose the right option to fill the gap Nabal _____

b) Won't be sleeping

d) Both Will be sleeping and Won't be sleeping his PhD in trauma studies by December this year -

a) will completing

c) will have completed

7. Choose the right option to fill the gap

b) will have been completing

d) will have been completed

Jean-Martin Charcot _____ for us soon.

a) Will work

c) Would have worked

8. Choose the correct one

b) Shall work



d) Both Will work and Shall work

a) I think he would not come with us to the meeting

b) I think he might not come with us to the meeting

c) I think he shall not come with us to the meeting

d) I think he might not come with us to the meeting

9. Choose the correct use of the modal verb

a) I will make dinner tonight

b) I will be making dinner tonight

c) Both I will make dinner tonight and I will be making dinner tonight

d) None of these

10. The sentence below contains an error Identify which part has the error and choose from the options I am finding it difficult to choose between my pair of red trousers and my pair of green ones

a) I did find it difficult

b) To choose between my pair of red trousers

c) And my pair of green one di No crore

11. Identify the correct meaning of the idiom

That ship has sailed

a) Work, better to leave

c) Work quickly

b) It's too late

d) Go through something difficult

12. Choose one word for the following

A mild or indirect expression substituted for an offensive or harsh one

- a) Wriggle
- b) Sacrilege
- c) Euphemism
- d) 4

13. Choose the most suitable interjection to complete the sentence

- a) Oops!

I spilt my coffee on my dress.

- b) Aww!
- c) Phew!

14. Fill in the blank with the correct word

- d) Ah!

Nisha is pleased

- a) about

her result.

- b) at
- c) with

- d) all of these

15. Fill in the right verb form.

The horse was

- a) ride

by the young boy.



- b) rode
- c) ridden
- d) riding

16. Change the voice of the following sentence.

They speak French at this shop.

- a) French is spoken at this shop
- b) French was spoken at this shop
- c) French has spoken at this shop
- d) French was spoken at this shop

17. Which of these words is most nearly the opposite of the word provided?

Pit

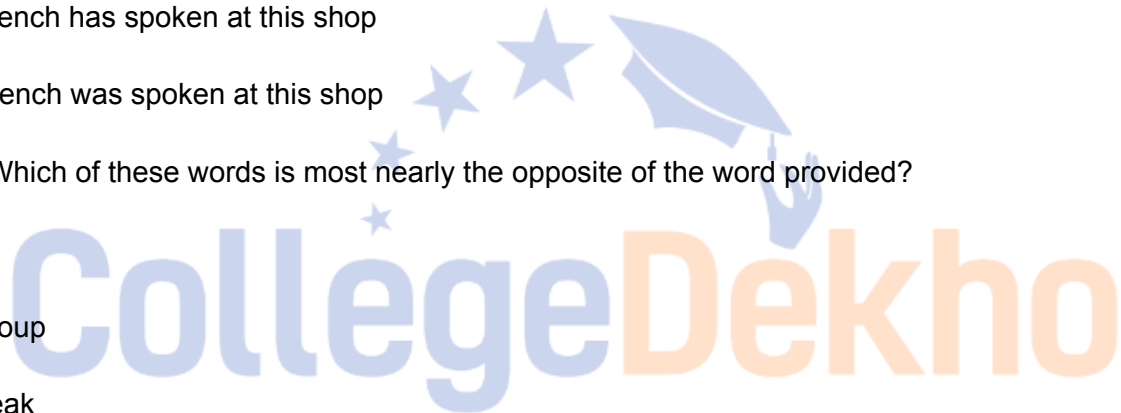
- a) group
- b) peak
- e) select
- d) Marty

18. Which of these words is closest in meaning to the word provided?

Banish

- a) exile
- h) lute
- c) fade
- d) clean

19. Choose the right option to fill the gap



Mrs Adams was _____ dinner at 6 a.m. yesterday.

- a) has
 - b) had
 - c) have
 - d) having
-

Section - MATHEMATICS

1. A survey of 500 television viewers produced the following information, 285 watch football, 195 watch hockey, 115 watch basketball, 45 watch football and basketball, 70 watch football and hockey, 50 watch hockey and basketball, 50 do not watch any of the three games. The number of viewers, who watch exactly one of the three games is

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- a) 325
- b) 310
- c) 315
- d) 372

2. The minimum number of elements that must be added to the relation $R = \{(1,2),(2,3)\}$ on the set

$\{1,2,3\}$ so that it is an equivalence relation

- a) 3
- b) 5

c) 6

d) 7

3. A straight line through the origin O meets the parallel lines $4x + 2y = 9$ and $2x + y + 6 = 0$ at points P and Q respectively. The point O divides the segment PQ in the ratio

a) 1:2

b) 3:4

c) 2:1

d) 4:3

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4. The number of integral values of a for which $x^2 + y^2 + \lambda x + (1 - \lambda)y + 5 = 0$ is the equation of a circle whose radius cannot exceed 5, is

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a) 14

b) 15

c) 16

d) 18

5. The number of values of e such that the straight line $y = 4x + c$ touches the curve $(x^2)/4 + y^2 = 1$ is

a) 0

b) 1

c) 2

d) infinite

6. The plane $x - 2y + 3z = 17$ divides the line joining the points $(-2, 4, 7)$ and $(3, 5, 8)$ in the ratio

a) 3:5

b) 3:10

c) 3:7

d) none of these

7. The ratio of the distances from the points $(1, -1, 3)$ and $(3, 3, 3)$ to the plane $5x + 2y - 7z + 9 = 0$

a) 2:1

b) 1:3

c) 1:1

d) 3:2

Section - CHEMISTRY

1. A mixture of CO and C^*O_{2} has vapour density 20 at STP, 100 g of this mixture contains mole of CO

a) 0.4

b) 0.2

c) 0.625

d) 0.375

2. If ideal gas expands at a constant temperature

a) kinetic energy of molecules increases

b) the number of gas molecules increases

c) kinetic energy of the molecules remains the same

d) The pressure of the gas increases

3. Number of photons emitted by 10 watt bulb in 10 seconds, if the wavelength of the light is 1000 \AA , is

a) 1.01×10^{11}

b) 2.02×10^{13}

c) 3.03×10^{15}

d) 4.04×10^{19}

4. The hybridization of atomic orbitals of N in NO_2^+ + NO_3^- and NH_4^+ are respectively

a) sp^2 , sp^3

b) sp , sp^3 , sp^2

c) sp^2 , sp^3

d) sp^2 , sp^3

5. Which of the following statement(s) is (are) incorrect for alkali metals?

a) Li^+ ion is exceptionally small and thus shows covalent character in some compounds

b) Sodium oxide is amphoteric in nature

c) Lithium is the strongest reducing agent

d) All alkali metals and alkaline earth metals give blue colouration in liquid ammonia

6. The structures of quartz, mica, and asbestos have the common basic unit of

a) $(\text{SiO}_4)^+$

b) $(\text{SiO}_3)_2$

c) $(\text{SiO}_3)_2$

d) SiO_2

7. For advertisement the coloured discharged tubes contain

- a) He
- b) Ne
- c) Ar
- d) Kr

8. Given below, the catalyst and corresponding process/reaction are matched. The mismatch is

- a) $[\text{RhCl}(\text{PPh}_3)_2]$: Hydrogenation
- b) $\text{TiCl}_4 + \text{Al}(\text{C}_2\text{H}_5)_3$: Polymerization
- c) V_2O_5 : Haber-Bosch process
- d) Nickel: Hydrogenation

9. Gutta-percha, a naturally occurring highly crystalline non-elastic rubber, consists of

- a) 1, 4-polyisoprenes in which all the double bonds have E-configurations
- b) 1, 4-polyisoprenes in which all the double bonds have Z-configurations
- c) A mixture of Z-1, 4-polyisoprenes and E-1, 4-polyisoprenes
- d) 1, 4-polyisoprenes in which some double bonds have Z-configurations and some other have E-configurations

10. Statement-I: Glucose is in pyranose form and has a free anomeric hydroxyl group

Statement-II: In sucrose, glucose is in pyranose form and fructose is in furanose form

- a) Both I and II are true
- b) I is true, but II is false
- c) I is false, But II is true
- d) both I and II are false

11. The drug used for the treatment of throat infections is

- a) quinine
- c) sulpha drug like sulphanilamide
- b) piperazine
- d) isonicotin hydrazide

12. When two or more authors publish a new species or propose a new name, their names are linked using the epithet?

- a) In
- b) Ex
- c) emend
- d) et

13. Members of which kingdom have cell walls and are all heterotrophic?

- a) Plantae
- b) Fungi
- c) Animalia
- d) Protista

14. Squamous epithelium occurs in the inner lining of

- a) Kidney
- b) Pancreatic duct
- c) Lung Alveoli
- d) Heart

15. Which of the following statements is true?

- a) Eukaryotic cells have membrane-bound organelles
- b) Prokaryotic cells have a nucleus



c) Eukaryotic cells have genetic information

d) Prokaryotic cells are surrounded by a cell membrane

16. DNA structure was discovered by Watson and Crick in

a) 1953

b) 1962

c) 1952

d) 1951

17. Name the phenomena that begin when sugar solution is separated from water by a semipermeable membrane.

a) Osmosis

b) Diffusion

c) Imbibition

d) Translocation

18. This is a rich source of Vitamin C

a) Rice

b) Milk

c) Egg

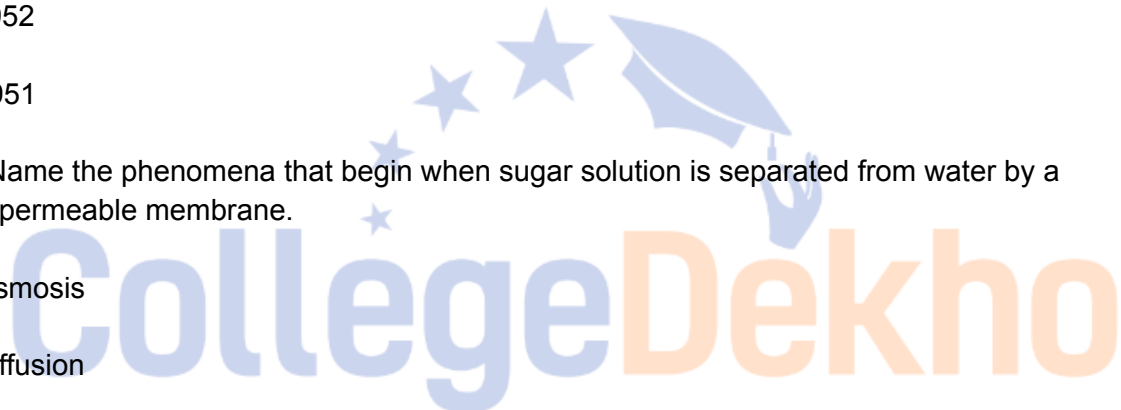
d) Lemon

19. Synthesis of $ADP + P_i \rightarrow ATP$ in grana is

a) Phosphorylation

b) Photophosphorylation

c) Oxidative Phosphorylation



d) Photolysis

20. When a neuron is in a resting state i.e. not conducting any impulse, the axonal membrane is

a) Comparatively more permeable to K^+ ions and nearly impermeable to Na^+

b) Comparatively more permeable to Na^+ ions and nearly impermeable to K^+ ions

c) Equally permeable to both Na^+ and K^+ ions

d) Impermeable to both Na^+ and K^+ ions

21. Parthenocarpy leads to

a) Seed fruit

b) Seedless fruit

c) No fruit

d) Seed formation

22. Tyson's glands occur in males on

a) urethra

b) scrotum

c) prepuce

d) epididymis

23. Chromatin is composed of _____.

24. B-lymphocytes are

a) Formed in bone marrow

b) Preprocessed in bone marrow

c) Preprocessed in liver

d) Both Formed in bone marrow and Preprocessed in bone marrow



25. Choose the complex fertilizer

- a) Potassium sulphate
- b) Calcium ammonium nitrate
- c) Triple super phosphate
- d) Urea ammonium phosphate

26. Hop flowers are used for

- a) Gluconic acid production
- b) Citric acid production
- c) Vinegar production
- d) Beer production

27. The two DNA strands are held together by bonds of

- a) Nitrogen
- b) Oxygen
- c) Hydrogen
- d) Carbon

