

GSFC UNIVERSITY
SCHOOL OF SCIENCE
Admission Common Test for B.Sc. Chemistry, 2023-24

Time: 30 Minutes

Total Marks: 30

Instructions:

- i. All questions are compulsory.
 - ii. All questions are Multiple Choice Questions.
 - iii. Each question Carries 1 Mark.
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1. The phenomenon that cannot take place in sound waves is
 - a. Reflection
 - b. Interference
 - c. Diffraction
 - d. Polarization
2. Working together, sharing and cooperative - means –
 - a. Empowerment
 - b. Collaborative skills
 - c. Delegating Responsibilities
 - d. None
3. If..... I would not lose temper
 - a. I were you
 - b. I was you
 - c. I am not you
 - d. I am you
4. Please, come..... the bathroom.
 - a. out of
 - b. over
 - c. on
 - d. in
5. Please, don't laugh..... those beggars.
 - a. for
 - b. against
 - c. at
 - d. from
6. Look at all those black clouds! It.... today.



- a. Is going to rain
 - b. Is raining
 - c. Will be rain
 - d. Rains
7. In Huygen's wave theory, the locus of all point in the same state of vibration is known as
- a. Wavefront
 - b. Vibrator
 - c. Frequency
 - d. Wavelength
8. Speed of sound will be maximum in
- a. Solid
 - b. Liquid
 - c. Gases
 - d. water
9. Process which occurs at constant temperature is known as
- a. Isothermal
 - b. Adiabatic
 - c. Isobaric
 - d. Isochoric
10. In the famous Einstein's equation $E = mc^2$, what does 'm' stand for?
- a. Mass
 - b. Momentum
 - c. Meter
 - d. Mega
11. Derivative of $\sin x =$ _____
- a. $-\cos x$
 - b. $\sin x$
 - c. $\cos x$
 - d. $-\sin x$
12. The differential equation is called a linear if degree of the equation is
- a. linear
 - b. Cubic
 - c. quadratic
 - d. none
13. The graph of $y = x$ and $x = 2$ is
- a. Square
 - b. Triangle
 - c. Circle
 - d. Parabola



14. The integration of $\sin x$ is

- a. $-\cos x$
- b. $-\sin x$
- c. $-\tan x$
- d. $\cos x$

15. Average of all observations in a set of data is known as

- a. Median
- b. Range
- c. Mean
- d. Mode

16. Hydrogen bond is strongest in

- a. S-H-O
- b. O-H-S
- c. F-H-F
- d. O-H-N

17. Which of the following alkaline earth metals is the rarest in the earth crust?

- a. Calcium
- b. Strontium
- c. Radium
- d. Beryllium

18. The main use of salt in the diet is to

- a. make the taste of food better
- b. produce in small amounts the hydrochloric acid required for the digestion of food
- c. ease the process of cooking
- d. increase the solubility of food particles in water

19. Which of these metals is most commonly used as control rods in the nuclear reactors?

- a. Platinum
- b. Cadmium
- c. Cobalt
- d. Silver

20. The polymer containing strong intermolecular H-bonding and crystalline nature is



- a. Polystyrene
- b. Natural rubber
- c. Teflon
- d. Nylon 6, 6

21. Bithional added to soap acts as

- a. buffering agent
- b. softener
- c. drying
- d. antiseptic

22. Drug which is used to reduce anxiety and brings calmness is known as

- a. Diuretic
- b. Analgesic
- c. Antacids
- d. Tranquilizer

23. Butylated Hydroxy Toluene (BHT) as a food additive acts as

- a. flavouring agent
- b. colouring agent
- c. cleaning agent
- d. antioxidant

24. α -D (+) glucose and β -D (+) – glucose are

- a. Enantiomers
- b. Geometrical isomers
- c. Epimers
- d. Anomers

25. Hydrolysis of sucrose gives

- a. Glucose only
- b. Glucose and galactose
- c. Maltose
- d. Glucose + fructose

26. $F_2C = CF_2$ is a monomer of

- a. Glyptal



- b. Nylon-6
- c. Buna-S
- d. Teflon

27. The correct order of increasing bond length of C – H, C – O, C – C and C = C is

- a. $C-H < C-O < C-C < C=C$
- b. $C-H < C=C < C-O < C-C$
- c. $C-C < C=C < C-O < C-H$
- d. $C-O < C-H < C-C < C=C$

28. When conc. H_2SO_4 is heated with P_2O_5 , the acid is converted into

- a. sulphur
- b. sulphur dioxide
- c. sulphur trioxide
- d. a mixture of sulphur dioxide and sulphur trioxide

29. Which of these is NOT an allotropic form of carbon?

- a. Diamond
- b. Graphite
- c. Fullerene
- d. None of the above

30. What is the bond length in C=C bond?

- a. 156 pm
- b. 148 pm
- c. 134 pm
- d. 172 pm
