



Balochistan University
of Engineering and
Technology Khuzdar

Regular
Merit
Seats

Pre-Admission Test
October 18

2014

INSTRUCTIONS

- (i) Please do not write anything on question papers.
- (ii) All answers must be provided on the answer sheet
- (iii) Fill in the circles properly for every correct answer
- (iv) There is a negative marking of $\frac{1}{4}$ for each wrong answer.
- (v) Do not fold the answer sheet.

Max. Time
allowed
100 minutes

THE ENGINEERS' INN

Pre-Admission Test

October 18

Part -I
English

2014

Maximum Marks -25

Find out best one-word substitute of the following phrases

1. A child born after the death of his father
 - a. Posthumous child
 - b. Orphan child
 - c. Wicket child
 - d. Innocent child
2. A person who walks while sleeping
 - a. Unconscious
 - b. Dog sleep
 - c. Insomnia
 - d. Somnambulist
3. Undue favour shown by a man in high position to his own relatives
 - a. Corruption
 - b. Nepotism
 - c. Bribe
 - d. Injustice
4. The science dealing with bird life
 - a. Zoology
 - b. Biology
 - c. Ornithology
 - d. Ornology
5. Science of insects (A)
 - a. Entomology
 - b. Etymology
 - c. Pesticide
 - d. Philanthropist

Select the word having the correct spelling

6. a. enforcement b. inforceme.t c. enforment d. enfourcement
7. a. desireable b. disirable c. desirible d. desreible

Identify the correct sentence from the given choices

8.
 - a. Higher you go, cooler it is.
 - b. Higher you go, the cooler it is.
 - c. The higher you go, the cooler it is.
 - d. The higher you go, cooler it is.
9.
 - a. Four miles are the distance to the office.
 - b. Four miles is distance to the office.
 - c. Four miles is the distance to the office.
 - d. Four miles are the distance from the office.
10.
 - a. Water can be reduced to oxygen and hydrogen by electrolysis.
 - b. Water can be reduced from oxygen and hydrogen by electrolysis.
 - c. Water can be reduced in oxygen and hydrogen by electrolysis.
 - d. Water can be reduced within oxygen and hydrogen by electrolysis.

Find out the Synonym

11. ABSTAIN
 - a. Refrain
 - b. Ingest
 - c. Take in
 - d. Consume

12. COMMENCE

- a. End b. Begin c. Run d. Finish

13. BENEVOLENCE

- a. Kindness b. Adopt c. Secure d. Greetings

14. CAMOUFLAGE

- a. Aggressive b. Deception c. Vigilant d. Honour

15. COWARDICE

- a. Thankful b. Brave c. Fear d. Frighter

Find out the **Antonym**

16. IMPARTIAL

- a. Hostile b. Biased c. Sincere d. Worried

17. LUMINOUS

- a. Clear b. Dim c. Brittle d. Clever

18. DEARTH

- a. Lack b. Poverty c. Abundance d. Foreign

19. ZENITH

- a. Worst b. Apex c. Nadir d. Past

20. TRANSPARENT

- a. Limpid b. Coloured c. Clear d. Opaque

Choose the **best conversion from direct speech into indirect speech**

21. He said, "I like this song."

- a- He said that I liked that song
 b- He said that he liked that song
 c- He said, he liked that song
 d- He said that he liked this song

22. "Don't play on the grass, boys," she said.

- a. She told the boys to play on the grass.
 b. She told the boys that they may not play on the grass.

- c. She told the boys do not play on the grass.
d. She told the boys not to play on the grass.
23. *Ahmad's uncle cried out, "Call the fire-brigade: there is a fire next door".*
a- Ahmad's uncle ordered him to call the fire-brigade since there was fire next door.
b- Ahmad's uncle asked him to call the fire-brigade since there was a fire next door.
c- Ahmad's uncle shouted for the fire-brigade to be called as there was a fire next door.
d- Ahmad's uncle ordered to call the fire-brigade because there was a fire next door.
24. *Raza said to me, "Has your father returned from Kalat"?*
a. Raza said to me that my father has returned from Kalat.
b. Raza asked me if my father had returned from Kalat.
c. Raza told me that his father had returned from Kalat.
d. Raza enquired me if his father had returned from Kalat
25. *Can you solve this problem?" he asked me*
a. He asked me if you could solve that problem
b. He asked me that you could solve that problem
c. He asked me if I could solve that problem
d. He asked me if he could solve that problem.
a. He didn't wanted to see that film ✕

Pre-Admission Test

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Part-II
Mathematics

2014

Maximum Marks -25

- a) direction cosine
c) acute angles
- b) direction angles
d) components

24- If \vec{A} and \vec{B} are the vectors to be multiplied with the vector \vec{C} perpendicular to their plane can be determined by

a) $\frac{\vec{A} \times \vec{B}}{|\vec{A} \times \vec{B}|}$

b) $\frac{|\vec{A} \times \vec{B}|}{|\vec{A}| |\vec{B}|}$

c) $\frac{|\vec{A}| |\vec{B}|}{|\vec{A} \times \vec{B}|}$

d) $\frac{\vec{A} \cdot \vec{B}}{|\vec{A} \cdot \vec{B}|}$

25- What will be the value of scalar triple product if any two vectors of scalar triple product are equal?

- a) 1
c) 2

- b) 0
d) -1

Pre-Admission Test

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**Part-III
Physics**

2014

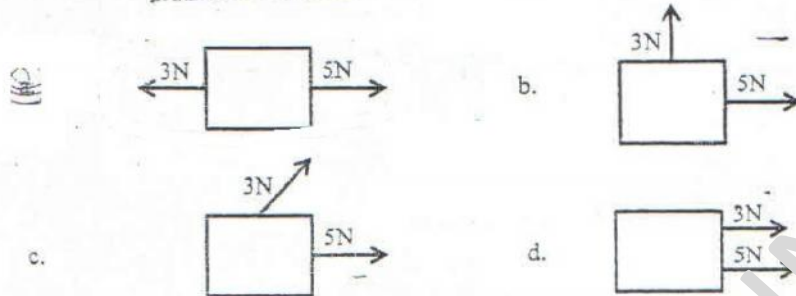
Maximum Marks 25

THE ENGINEERS' INN

1. The SI standard of length is based on
- the distance from the north pole to the equator along a meridian passing through Paris
 - wavelength of light emitted by Hg^{198}
 - a precision meter stick in Paris
 - the speed of light
2. gram is
- 10^{-6} kg
 - 10^{-3} kg
 - 10^3 kg
 - 10^6 kg
3. The unit of force called the newton is
- $9.8 \text{ kg} \cdot \text{m/s}^2$
 - 1 kg of mass
 - $1 \text{ kg} \cdot \text{m/s}^2$
 - 1 kg of force
4. Mass differs from weight in that
- weight is a force and mass is not
 - all objects have weight but some lack mass
 - the mass of an object is always more than its weight
 - mass can be expressed only in the metric system
5. The unit of current is
- kilowatt-hour
 - coulomb/second
 - coulomb
 - volt
6. The value of $\hat{i} \cdot (\hat{j} \times \hat{k})$ is
- zero
 - 1
 - +1
 - $\sqrt{-1}$
7. Radio waves of wavelength 300 m have a frequency of
- 10^{-3} kHz
 - 500 kHz
 - 1 MHz
 - 9 MHz
8. If we add all the 7 colours of rainbow (red, yellow, blue, green, orange, violet and indigo), the resultant colour would be
- White
 - Black
 - Maroon
 - Dark Blue
9. Which from the following is NOT a Renewable Energy?
- Geothermal
 - Solar
 - Nuclear
 - Biofuels
10. Of the following situations, which one is impossible

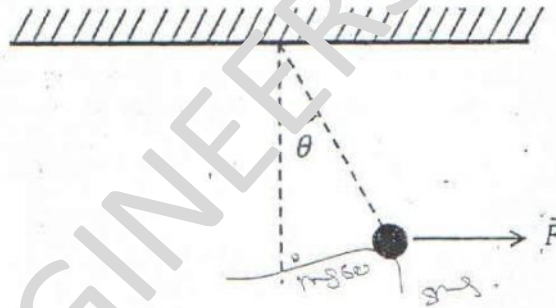
- a. A body having velocity east and acceleration east
b. A body having zero velocity and non-zero acceleration
c. A body having constant acceleration and variable velocity
d. A body having constant velocity and variable acceleration
11. Planets are kept in orbit by the?
a. Gravitational pull of the Sun
b. Attraction among the Planets and the Sun
c. Radiations from the Sun
d. Attraction among the Planets
12. Ozone layer protects the Earth from _____ radiations from the Sun.
a. infrared
b. ultraviolet
c. X-rays
d. microwaves
13. If the sum of all the forces acting on a moving object is zero, the object will
a. slow down and stop
b. change the direction of its motion
c. accelerate uniformly
d. continue moving with constant velocity
14. An object weighing 15 newtons is lifted from the ground to a height of 0.22 meter. The increase in the object's gravitational potential energy is approximately
a. 310 J
b. 32 J
c. 3.3 J
d. 0.3 J
15. Moving 2.5×10^{-6} coulomb of charge from point A to point B in an electric field requires 6.3×10^{-4} joule of work. The potential difference between points A and B is approximately
a. 1.6×10^{-9} V
b. 4.0×10^{-3} V
c. 2.5×10^{-2} V
d. 1.0×10^{-14} V
16. A car travels 90 meters due north in 15 seconds. Then the car turns around and travels 40 meters due south in 5 seconds. What is the magnitude of the average velocity of the car during this 20 second interval
a. 2.5 m/s
b. 5.0 m/s
c. 6.5 m/s
d. 7.0 m/s
17. A car travels 20 km at an average speed of 80 km/h and then travels 40 km at an average speed of 40 km/h. The average speed of the car for this 80 km trip is
a. 50 km/h
b. 45 km/h
c. 48 km/h
d. 53 km/h
18. An object is moving on a circular path of radius π meters at a constant speed of 4 m/s. The time required for one revolution is
a. $2/\pi^2$ s
b. $\pi^2/2$ s
c. $\pi/2$ s
d. $2/\pi$ s

19. Two forces, one with a magnitude of 3N and the other with a magnitude of 5N, are applied to an object. For which orientations of the forces shown in the diagrams is the magnitude of the acceleration of the object the least?



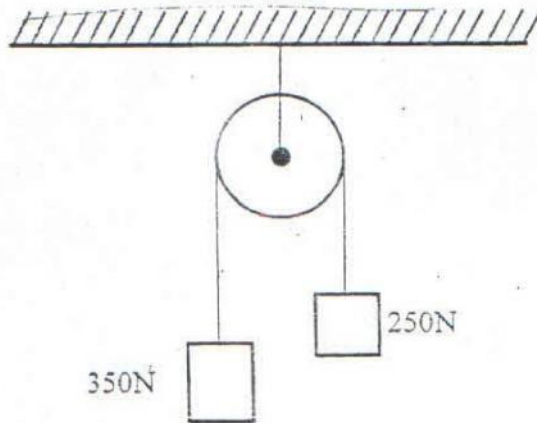
20. A 1-N pendulum bob is held at an angle θ from the vertical by a 2-N horizontal force F as shown. The tension in the string supporting the pendulum bob (in newtons) is

- a. $A \cdot \cos\theta$
- b. $2/\cos\theta$
- c. $\sqrt{5}$
- d. 1



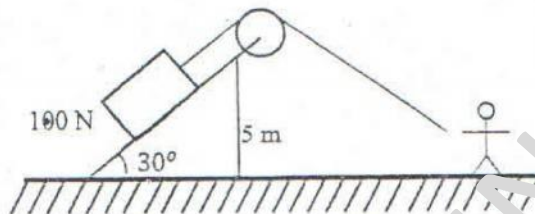
21. Two blocks, weighing 250N and 350N, respectively, are connected by a string that passes over a massless pulley as shown. The tension in the string is

- a. 210N
- b. 290N
- c. 410N
- d. 500N



2. A man pulls a 100-N crate up a frictionless 30° slope 5 m high, as shown. Assuming that the crate moves at constant speed, the work done by the man is

- a. -250 J
- b. 0
- c. 250 J
- d. 500 J



23. The rate of decay of radioactive substance

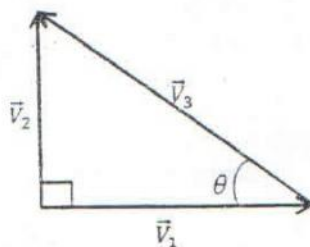
- a. decreases linearly with time
- b. decreases exponentially with time
- c. increases linearly with time
- d. increases exponentially with time

24. The specific heat of a substance is

- a. the amount of heat energy to change the state of one gram of the substance
- b. the amount of heat energy per unit mass emitted by oxidizing the substance
- c. the amount of heat energy per unit mass to raise the substance from its freezing to its boiling point
- d. the amount of heat energy per unit mass to raise the temperature of the substance by 1°C

25. The vector \vec{V}_3 in the diagram is equal to

- a. $\vec{V}_1 - \vec{V}_2$
- b. $\vec{V}_1 + \vec{V}_2$
- c. $\vec{V}_2 - \vec{V}_1$
- d. $\vec{V}_1 \cos \theta$



Part IV
Chemistry

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Maximum Marks -25

1. K is the chemical symbol for which element?
 - a. Potassium
 - b. Krypton
 - c. Cobalt
 - d. Copper
2. A substance that conducts an electric current when dissolved in water is called
 - a. a catalyst
 - b. a metalloid
 - c. an electrolyte
 - d. a conductor
3. In a chemical reaction, a catalyst changes the
 - a. activation energy
 - b. potential energy of the products
 - c. potential energy of the reactants
 - d. heat of reaction
4. The branch of chemistry that deals with substances consisting of living organisms is called:
 - a. Organic Chemistry
 - b. Bio Chemistry
 - c. Physical Chemistry
 - d. Inorganic Chemistry
5. Substances which cannot be decomposed into two different substances by chemical process are called
 - a. Atoms
 - b. Molecules
 - c. Elements
 - d. Compounds
6. Pure water can be obtained from various sources, but it always contains hydrogen and oxygen, combined by weight in a ratio of
 - a. 1:2
 - b. 1:4
 - c. 1:8
 - d. 1:16
7. The process, in which a solid directly changes into vapours without passing through liquid phase, is called:
 - a. Evaporation
 - b. Sublimation
 - c. Condensation
 - d. Neutralization
8. NaCl is an example of
 - a. Covalent solid
 - b. Ionic solid
 - c. Molecular solid
 - d. Metallic solid
9. What is the maximum number of electrons that an orbital can accommodate?
 - a. 0
 - b. 2
 - c. 3
 - d. 4
10. Entropy is used to
 - a. Explain how energy is stored
 - b. Explain how an exothermic reaction can become endothermic
 - c. Measures the energy required to break chemical bond
 - d. Indicate the disorder of a system
11. A solid that sublimates on heating is

- a. Sodium Chloride
 c. Lead sulphate
- b. Copper sulphate
 d. Ammonium chloride
12. A diamond doesn't conduct electricity because
 a. Its structure is very compact
 b. Only carbon atoms are present in its structure
 c. There are no free electrons
 d. It is crystalline in nature
13. Which of the following law states that equal volume of all gases contain equal number of molecules
 a. Boyle's Law
 b. Charles Law
 c. Avogadro's Law
 d. Gay Lussac's law
14. One mole of water corresponds to
 a. 22.4 litres at 1 atm and at 25°C
 b. 6.02×10^{23} atoms of hydrogen and 6.02×10^{23} atoms of oxygen
 c. 18 g
 d. 1 g
15. Alkanes also called as
 a. Olefins
 b. Paraffin
 c. Acetylene
 d. Alkynes
16. The value of R (gas constant), when pressure is expressed in N/m^2 is
 a. $0.0821 \text{ dm}^3 \text{ atm K}^{-1} \text{ mole}^{-1}$
 b. $8.213 \text{ dm}^3 \text{ atm K}^{-1} \text{ mole}^{-1}$
 c. $8.3143 \text{ J K}^{-1} \text{ mole}^{-1}$
 d. $9.8 \text{ J K}^{-1} \text{ mole}^{-1}$
17. Hydrogen combines with other elements and forms binary compounds called
 a. Halogens
 b. Hydrides
 c. Hydration
 d. Hydrolysis
18. When water is cooled to 0°C then its density decreases because of
 a. Change in bond angle in its structure
 b. It's a natural phenomena
 c. Empty spaces established in the structure of ice
 d. Nature of bond changes between hydrogen and oxygen
19. The maximum temperature above which a gas cannot be liquefied no matter how much pressure is increased is called
 a. Absolute temperature
 b. vaporizing temperature
 c. Critical Temperature
 d. Super state temperature
20. With the increase in quantity of heat added to a liquid its boiling point will
 a. Increase
 b. Decrease
 c. First increase and then decrease
 d. Remain constant
21. Conduction of current in metallic solids is due to
 a. Free Electrons
 b. Free Atoms
 c. Positive ions
 d. Negative Ions

22. The x-rays have

- a. High energy High Frequency
- b. High energy Low Frequency
- c. Low energy High Frequency
- d. Low energy Low Frequency

23. Which of the following is not an air pollutant gas?

- a. CO
- b. CO₂
- c. NO
- d. SO₂

24. The luster of metal is due to

- a. Its high density
- b. Its high polishing
- c. Its chemical inertness
- d. Presence of free electrons

25. Celsius and Fahrenheit Scales are related by

- a. $^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$
- b. $^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} + 32)$
- c. $^{\circ}\text{F} = \frac{9}{5} (32 + ^{\circ}\text{C})$
- d. $^{\circ}\text{C} = \frac{5}{9} (\text{K} - 32)$

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