

NTA Florence Nightingale College of Nursing

Topic:- NTA FN CON_Oct20_General Health

1) Covid-19 is caused by which organism?

[Question ID = 158]

1. SARS-CoV-2 [Option ID = 629]
2. MERS - CoV [Option ID = 630]
3. SARS-CoV [Option ID = 631]
4. Coronavirus 229E [Option ID = 632]

Correct Answer :-

- SARS-CoV-2 [Option ID = 629]

2) Active immunity is produced when:

[Question ID = 159]

1. An organism manufactures its own antigen similar to the foreign protein
[Option ID = 633]
2. Globulin from sheep or horses are administered to protect against particular disease
[Option ID = 634]
3. A mild infection or a vaccination causes antibodies production
[Option ID = 635]
4. A virulent strain of bacteria is injected into an organism
[Option ID = 636]

Correct Answer :-

- A mild infection or a vaccination causes antibodies production
[Option ID = 635]

3) Typhoid fever spreads by:

[Question ID = 160]

1. Blood [Option ID = 637]
2. Droplet infection [Option ID = 638]
3. Oro-fecal route [Option ID = 639]
4. Close contact [Option ID = 640]

Correct Answer :-

- Oro-fecal route [Option ID = 639]

4) A sexually transmitted bacterial disease is:

[Question ID = 161]

1. AIDS [Option ID = 641]
2. Syphilis [Option ID = 642]
3. Herpes [Option ID = 643]
4. Hepatitis [Option ID = 644]

Correct Answer :-

- Syphilis [Option ID = 642]

5) Hormone responsible for fluid and electrolyte balance is

[Question ID = 162]

1. Antidiuretic Hormone [Option ID = 645]
2. Angiotensin [Option ID = 646]
3. Thyroxin [Option ID = 647]
4. Renin [Option ID = 648]

Correct Answer :-

- Antidiuretic Hormone [Option ID = 645]

6) Estrogen and progesterone in the birth control pills prevent pregnancy by

[Question ID = 163]

1. Having a positive feedback effect on FSH and LH [Option ID = 649]
2. Preventing ovulation from occurring [Option ID = 650]
3. Not allowing the endometrium of the uterus to fully develop [Option ID = 651]
4. Preventing the sperm from entering the ovum [Option ID = 652]

Correct Answer :-

- Preventing ovulation from occurring [Option ID = 650]

7) Tuberculosis is caused by:

[Question ID = 164]

1. Mycobacterium [Option ID = 653]
2. Salmonella [Option ID = 654]
3. Coccidiomyces [Option ID = 655]
4. Streptococcus [Option ID = 656]

Correct Answer :-

- Mycobacterium [Option ID = 653]

8) Dengue fever spreads by:

[Question ID = 165]

1. Aedes mosquito [Option ID = 657]
2. Anopheles mosquito [Option ID = 658]

3. Tick [Option ID = 659]
4. Sand fly [Option ID = 660]

Correct Answer :-

- Aedes mosquito [Option ID = 657]

9) The method of reducing the number of pathogens from any article, surface or medium is called as

[Question ID = 166]

1. Sterilization [Option ID = 661]
2. Disinfection [Option ID = 662]
3. Incineration [Option ID = 663]
4. Lysis [Option ID = 664]

Correct Answer :-

- Disinfection [Option ID = 662]

10) Longest bone in human body is.....

[Question ID = 167]

1. Tibia
[Option ID = 665]
2. Fibula
[Option ID = 666]
3. Femur
[Option ID = 667]
4. Humerus
[Option ID = 668]

Correct Answer :-

- Femur
[Option ID = 667]

11) The normal pH of blood is

[Question ID = 168]

1. 6.8 [Option ID = 669]
2. 7.1 [Option ID = 670]
3. 7.4 [Option ID = 671]
4. 7.9 [Option ID = 672]

Correct Answer :-

- 7.4 [Option ID = 671]

12) Obesity is best assessed by

[Question ID = 169]

1. Body Mass Index

[Option ID = 673]

2. Basal Metabolic Rate

[Option ID = 674]

3. Growth chart

[Option ID = 675]

4. None of these

[Option ID = 676]

Correct Answer :-

- Body Mass Index

[Option ID = 673]

13) Which one of the following is a water borne disease?

[Question ID = 170]

1. Malaria [Option ID = 677]

2. Tuberculosis [Option ID = 678]

3. Cholera [Option ID = 679]

4. Chicken pox [Option ID = 680]

Correct Answer :-

- Cholera [Option ID = 679]

14) Triple vaccine is a prophylactic measure against:

[Question ID = 171]

1. Polio, Diphtheria and Tetanus [Option ID = 681]

2. Tetanus, Diphtheria and Plague [Option ID = 682]

3. Tetanus, Diphtheria and Pertussis [Option ID = 683]

4. Smallpox, Chickenpox and Measles [Option ID = 684]

Correct Answer :-

- Tetanus, Diphtheria and Pertussis [Option ID = 683]

15) Insulin is secreted by:

[Question ID = 172]

1. Pancreas [Option ID = 685]

2. Pituitary Gland [Option ID = 686]

3. Thyroid Gland [Option ID = 687]

4. Liver [Option ID = 688]

Correct Answer :-

- Pancreas [Option ID = 685]

16) Male sex hormone is:

[Question ID = 173]

1. Estrogen [Option ID = 689]
2. Progesterone [Option ID = 690]
3. Testosterone [Option ID = 691]
4. Cortisone [Option ID = 692]

Correct Answer :-

- Testosterone [Option ID = 691]

17) From where CORONA virus got its name

[Question ID = 174]

1. Due to their crown like projections
[Option ID = 693]
2. Due to their leaf like projections
[Option ID = 694]
3. Due to their surface structure of bricks
[Option ID = 695]
4. None of these
[Option ID = 696]

Correct Answer :-

- Due to their crown like projections
[Option ID = 693]

18) All of the following are methods of physical examination EXCEPT

[Question ID = 175]

1. Auscultation [Option ID = 697]
2. History taking [Option ID = 698]
3. Inspection [Option ID = 699]
4. Palpation [Option ID = 700]

Correct Answer :-

- History taking [Option ID = 698]

19) As per WHO definition of health, which of the following is not a part:

[Question ID = 176]

1. Physical wellbeing [Option ID = 701]
2. Financial wellbeing [Option ID = 702]
3. Mental wellbeing [Option ID = 703]
4. Social wellbeing [Option ID = 704]

Correct Answer :-

- Financial wellbeing [Option ID = 702]

20) Leukemia is a type of:

[Question ID = 177]

1. Blood Cancer [Option ID = 705]
2. Liver Cancer [Option ID = 706]
3. Skin Cancer [Option ID = 707]
4. Prostatic Cancer [Option ID = 708]

Correct Answer :-

- Blood Cancer [Option ID = 705]

21) Kala Azar is caused by:

[Question ID = 178]

1. Taenia solium [Option ID = 709]
2. Trypanosoma [Option ID = 710]
3. Leishmania donovani [Option ID = 711]
4. Wuchereria bancrofti [Option ID = 712]

Correct Answer :-

- Leishmania donovani [Option ID = 711]

22) Ring worm infection in humans is caused by:

[Question ID = 179]

1. Fungi [Option ID = 713]
2. Bacteria [Option ID = 714]
3. Virus [Option ID = 715]
4. Nematodes [Option ID = 716]

Correct Answer :-

- Fungi [Option ID = 713]

23) Western blot test is used in the detection of:

[Question ID = 180]

1. Cancer [Option ID = 717]
2. Leprosy [Option ID = 718]
3. Tuberculosis [Option ID = 719]
4. AIDS [Option ID = 720]

Correct Answer :-

- AIDS [Option ID = 720]

24) Neutrophils are responsible for

[Question ID = 181]

1. Apoptosis [Option ID = 721]
2. Pinocytosis [Option ID = 722]
3. Phagocytosis [Option ID = 723]
4. Endocytosis [Option ID = 724]

Correct Answer :-

- Phagocytosis [Option ID = 723]

25) CPR stands for

[Question ID = 182]

1. Cardiopulmonary revival [Option ID = 725]
2. Cardiopulmonary resuscitation [Option ID = 726]
3. Cardiopulmonary recycle [Option ID = 727]
4. Cardiopulmonary recovery [Option ID = 728]

Correct Answer :-

- Cardiopulmonary resuscitation [Option ID = 726]

26) Elephantiasis is caused by:

[Question ID = 183]

1. Entrobis vermicularis [Option ID = 729]
2. Wuchereria bancrofti [Option ID = 730]
3. Dracunculus medinences [Option ID = 731]
4. Ecchinococcus granulosus [Option ID = 732]

Correct Answer :-

- Wuchereria bancrofti [Option ID = 730]

27) Down's Syndrome is:

[Question ID = 184]

1. Trisomy 8 [Option ID = 733]
2. Trisomy 13 [Option ID = 734]
3. Trisomy 21 [Option ID = 735]
4. Trisomy 18 [Option ID = 736]

Correct Answer :-

- Trisomy 21 [Option ID = 735]

28) Which of the following is not a part of National Immunization program?

[Question ID = 185]

1. Tetanus [Option ID = 737]
2. MMR [Option ID = 738]
3. Polio [Option ID = 739]
4. Yellow fever [Option ID = 740]

Correct Answer :-

- Yellow fever [Option ID = 740]

29) Lifestyle related disease are all except:

[Question ID = 186]

1. Hypertension [Option ID = 741]

2. Diabetes [Option ID = 742]
3. Obesity [Option ID = 743]
4. Tuberculosis [Option ID = 744]

Correct Answer :-

- Tuberculosis [Option ID = 744]

30) Which one of the following is a hereditary disease?

[Question ID = 187]

1. Polio [Option ID = 745]
2. Small Pox [Option ID = 746]
3. Rabies [Option ID = 747]
4. Color Blindness [Option ID = 748]

Correct Answer :-

- Color Blindness [Option ID = 748]

Topic:- NTA FNCON_Oct20_Bio

1) Prop roots are found in

[Question ID = 188]

1. Baynan Tree [Option ID = 749]
2. Maize [Option ID = 750]
3. Sugarcane [Option ID = 751]
4. Tomato [Option ID = 752]

Correct Answer :-

- Baynan Tree [Option ID = 749]

2) In double fertilization, one sperm produces a diploid _____ and the other produces a triploid _____.

[Question ID = 189]

1. Zygote; primary endosperm
[Option ID = 753]
2. Primary endosperm; microspore
[Option ID = 754]
3. Antipodal; zygote
[Option ID = 755]
4. Polar nuclei; zygote
[Option ID = 756]

Correct Answer :-

- Zygote; primary endosperm

[Option ID = 753]

3) The double helix structure of a DNA molecule is stabilized by:

[Question ID = 190]

1. Phosphodiester bonds

[Option ID = 757]

2. Peptide bonds

[Option ID = 758]

3. α helix

[Option ID = 759]

4. Hydrogen bonds

[Option ID = 760]

Correct Answer :-

- Hydrogen bonds

[Option ID = 760]

4) The light reactions of photosynthesis are responsible for the production of:

[Question ID = 191]

1. Glucose

[Option ID = 761]

2. CO₂

[Option ID = 762]

3. ATP and NADPH

[Option ID = 763]

4. H₂O

[Option ID = 764]

Correct Answer :-

- ATP and NADPH

[Option ID = 763]

5) During non-cyclic photophosphorylation, photosystem I functions to _____, and photosystem II functions to _____.

[Question ID = 192]

1. synthesize ATP; produce O₂

[Option ID = 765]

2. Reduce NADP^+ ; oxidize H_2O

[Option ID = 766]

3. Reduce CO_2 ; oxidize NADPH

[Option ID = 767]

4. Restore an electron to its reaction centre; gain an electron from water.

[Option ID = 768]

Correct Answer :-

- Reduce NADP^+ ; oxidize H_2O

[Option ID = 766]

6) Which of the following is not a component of DNA?

[Question ID = 193]

1. Uracil

[Option ID = 769]

2. 5-C sugars

[Option ID = 770]

3. Adenine

[Option ID = 771]

4. Phosphate groups

[Option ID = 772]

Correct Answer :-

- Uracil

[Option ID = 769]

7) Age of an oak tree can be determined by counting the annual rings of _____ formed by _____.

[Question ID = 194]

1. Primary xylem/apical meristem

[Option ID = 773]

2. Secondary phloem/vascular cambium

[Option ID = 774]

3. Dermal tissue/cork cambium

[Option ID = 775]

4. Secondary xylem/vascular cambium

[Option ID = 776]

Correct Answer :-

- Secondary xylem/vascular cambium

[Option ID = 776]

8) The adaptation of fixing atmospheric CO₂ at night, is a characteristic of

[Question ID = 195]

1. C₃ plants

[Option ID = 777]

2. C₄ plants

[Option ID = 778]

3. Glycophytes

[Option ID = 779]

4. Halophytes

[Option ID = 780]

Correct Answer :-

- C₄ plants

[Option ID = 778]

9) Brunner's glands are present in the

[Question ID = 196]

1. Serosa

[Option ID = 781]

2. Muscularis

[Option ID = 782]

3. Submucosa

[Option ID = 783]

4. Mucosal epithelium

[Option ID = 784]

Correct Answer :-

- Submucosa

[Option ID = 783]

10) Mitral valve guards the opening between

[Question ID = 197]

1. Left atrium and right ventricle

[Option ID = 785]

2. Left atrium and right atrium

[Option ID = 786]

3. Left atrium and left ventricle

[Option ID = 787]

4. Right atrium and right ventricle

[Option ID = 788]

Correct Answer :-

- Left atrium and left ventricle

[Option ID = 787]

11) Process of RBC formation is supported by which one of the following?

[Question ID = 198]

1. Thymosin [Option ID = 789]

2. Thyroxine T only [Option ID = 790]

3. Parathormone [Option ID = 791]

4. Thyroxine and Triiodothyronine [Option ID = 792]

Correct Answer :-

- Thyroxine and Triiodothyronine [Option ID = 792]

12) Match column I with column II and choose the correct option from the codes given below.

Column I

(a) Sphagnum

(b) Salvinia

(c) Cycas
cynaobacteria

(d) Chlorella

Column II

(i) heterosporous pteridophyte

(ii) used as food supplement by space travellers.

(iii) Coralloid roots associated with N_2 fixing

(iv) peat moss

Codes

[Question ID = 199]

1. a (i) b (ii) c (iii) d (iv)

[Option ID = 793]

2. a (ii) b (i) c (iv) d (iii)

[Option ID = 794]

3. a (iii) b (iv) c (i) d (ii)

[Option ID = 795]

4. a (iv) b (i) c (iii) d(ii)

[Option ID = 796]

Correct Answer :-

- a (iv) b (i) c (iii) d(ii)

[Option ID = 796]

13) In the Five Kingdom classification proposed by RH Whittaker (1969), the Plant Kingdom includes

[Question ID = 200]

1. Protista, Fungi, Algae, Bryophytes and Angiosperms [Option ID = 797]
2. Fungi, Algae, Bryophytes, Pteridophytes and Angiosperms [Option ID = 798]
3. Algae, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms [Option ID = 799]
4. Algae, Fungi, Bryophytes, Pteridophytes and Gymnosperms [Option ID = 800]

Correct Answer :-

- Algae, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms [Option ID = 799]

14) Which of the following groups is responsible for accumulation of large amount of cell wall deposits over billions of years forming diatomaceous earth

[Question ID = 201]

1. Rhodophyceae
[Option ID = 801]
2. Chlorophyceae
[Option ID = 802]
3. Dinoflagellates
[Option ID = 803]
4. Chryophytes
[Option ID = 804]

Correct Answer :-

- Chryophytes

[Option ID = 804]

15) Match list A with list B and select the correct code.

List A

- (a) Monograph
- (b) Manual
- (c) Flora preserved on sheets
- (d) Herbarium

List B

- (i) information on any on taxon
- (ii) account of habitat and distribution of plants of an area
- (iii) store house of dried, pressed plant specimens
- (iv) information for identification of names of

species of an area

Codes:

[Question ID = 202]

1. a (iv) b (ii) c (i) d (iii)

[Option ID = 805]

2. a (i) b (iv) c (ii) d (iii)

[Option ID = 806]

3. a (iii) b (iv) c (i) d (ii)

[Option ID = 807]

4. a (ii) b (iii) c (iv) d (i)

[Option ID = 808]

Correct Answer :-

- a (i) b (iv) c (ii) d (iii)

[Option ID = 806]

16) Which one of the following indicate the correct taxonomic categories for Wheat?

[Question ID = 203]

1. Triticum aestivum, Triticum, Poaceae Poales, Monocotyledonae, Angiospermae

[Option ID = 809]

2. Triticum aestivum, Triticum, Poaceae, Poales, Dicotyledonae, Angiospermae

[Option ID = 810]

3. Triticum aestivum, Triticum, Anacardiaceae, Sapindales, Dicotyledonae, Angiospermae

[Option ID = 811]

4. Triticum aestivum, Triticum, Poaceae, Poales, Monocotyledonae, Gymnospermae

[Option ID = 812]

Correct Answer :-

- Triticum aestivum, Triticum, Poaceae Poales, Monocotyledonae, Angiospermae

[Option ID = 809]

17) The two components of Binomial nomenclature are:

[Question ID = 204]

1. Generic name and local name

[Option ID = 813]

2. Generic name and specific epithet

[Option ID = 814]

3. Species name and local epithet

[Option ID = 815]

4. Generic name and family name

[Option ID = 816]

Correct Answer :-

- Generic name and specific epithet

[Option ID = 814]

18) Which of the following is not an outbreeding mechanism?

[Question ID = 205]

1. Self-sterility [Option ID = 817]

2. Geitonogamy [Option ID = 818]

3. Dloecy [Option ID = 819]

4. Herkogamy [Option ID = 820]

Correct Answer :-

- Geitonogamy [Option ID = 818]

19) Which of the following is not heterosporus?

[Question ID = 206]

1. Marsilea

[Option ID = 821]

2. Salvinia

[Option ID = 822]

3. Selaginella

[Option ID = 823]

4. Equisetum

[Option ID = 824]

Correct Answer :-

- Equisetum

[Option ID = 824]

20) Vexillary aestivation is characteristic feature of

[Question ID = 207]

1. Brassicaceae

[Option ID = 825]

2. Febaceae

[Option ID = 826]

3. Solanaceae

[Option ID = 827]

4. Liliaceae

[Option ID = 828]

Correct Answer :-

- Febaceae

[Option ID = 826]

21) Mycelium in phycomycetes members is

[Question ID = 208]

1. septate and Coenocytic [Option ID = 829]
2. Aseptate and Coenocytic [Option ID = 830]
3. Aseptate and Acoenocytic [Option ID = 831]
4. Septate and Acoenocytic [Option ID = 832]

Correct Answer :-

- Aseptate and Coenocytic [Option ID = 830]

22) A cofactor for the proteolytic Carboxypeptidase is

[Question ID = 209]

1. Haem
[Option ID = 833]
2. NAD
[Option ID = 834]
3. Zn
[Option ID = 835]
4. FAD
[Option ID = 836]

Correct Answer :-

- Zn

[Option ID = 835]

23) In humans beings, the membrane of the erythrocyte has approximately

[Question ID = 210]

1. 40% Protein and 50% lipids [Option ID = 837]
2. 50% Protein and 50% lipids [Option ID = 838]
3. 52% Protein and 40% lipids [Option ID = 839]

4. 40% Protein and 52% lipids [Option ID = 840]

Correct Answer :-

- 52% Protein and 40% lipids [Option ID = 839]

24) In cockroach the supra-oesophageal ganglion supplies nerves to

[Question ID = 211]

1. Oesophagus

[Option ID = 841]

2. Antennae

[Option ID = 842]

3. Compound eyes

[Option ID = 843]

4. Both Antennae and Compound eyes

[Option ID = 844]

Correct Answer :-

- Both Antennae and Compound eyes

[Option ID = 844]

25) Increase in ventricular pressure results in

[Question ID = 212]

1. Closure of tricuspid valve only

[Option ID = 845]

2. Closure of bicuspid valve only

[Option ID = 846]

3. Opening of tricuspid and bicuspid valve

[Option ID = 847]

4. Opening of Semilunar valves

[Option ID = 848]

Correct Answer :-

- Opening of Semilunar valves

[Option ID = 848]

26) Chemosensitive area in the medulla region can be activated by

[Question ID = 213]

1. Decrease in CO₂

[Option ID = 849]

2. Decrease in H^+

[Option ID = 850]

3. Increase in O_2

[Option ID = 851]

4. Increase in CO_2 and H^+

[Option ID = 852]

Correct Answer :-

- Increase in CO_2 and H^+

[Option ID = 852]

27) Fallopian tube consists of

[Question ID = 214]

1. Fimbriae, Infundibulum, Ampulla

[Option ID = 853]

2. Fimbriae, Ampulla, Isthmus

[Option ID = 854]

3. Infundibulum, Ampulla, Isthmus

[Option ID = 855]

4. Ampulla Isthmus

[Option ID = 856]

Correct Answer :-

- Infundibulum, Ampulla, Isthmus

[Option ID = 855]

28) Their cells count among WBC is the least and these cells are involved in inflammatory reactions

[Question ID = 215]

1. Neutrophils [Option ID = 857]

2. Eosinophils [Option ID = 858]

3. Basophils [Option ID = 859]

4. Lymphocytes [Option ID = 860]

Correct Answer :-

- Basophils [Option ID = 859]

29) Select the condition/s required during the formation of oxyhaemoglobin

[Question ID = 216]

1. High PO₂ and low CO₂

[Option ID = 861]

2. Low temperature

[Option ID = 862]

3. Lesser H⁺ concentration

[Option ID = 863]

4. All of these

[Option ID = 864]

Correct Answer :-

- All of these

[Option ID = 864]

30) Sporulation in Amoeba involves

[Question ID = 217]

1. Secretion of a three-layered hard covering

[Option ID = 865]

2. Withdrawal of Pseudopodia

[Option ID = 866]

3. Encystation

[Option ID = 867]

4. Multiple fission in encysted amoeba to produce many minute amoebae.

[Option ID = 868]

Correct Answer :-

- Multiple fission in encysted amoeba to produce many minute amoebae.

[Option ID = 868]

Topic:- Q28_Q30

1) Instructions: Read the following passage and answer the questions that follow, by choosing the most appropriate option in question

In 1930, a young American historian and philosopher, Will Durant, stepped onto the shores of India for the first time. He had embarked on a journey around the world to write what became the magnificent eleven-volume story *The Story of Civilisation*. But, he was, in his own words, so "filled with astonishment and indignation" at what he saw and read of Britain's 'conscious and deliberate bleeding of India' that he set aside his research

into the past and to write a passionate denunciation of this 'greatest crime in all history'. His short book, *The Case for India*, remains a classic, a profoundly emphatic work of compassion and outrage that tore apart the self-serving justifications of the British for their long and shameless record of rapacity in India.

Taking advantage of the collapse of the Mughal Empire and the rise of a number of warring principalities contending for authority across eighteenth-century India, the British had subjugated a vast land through the power of their artillery and the cynicism of their amorality.

Durant's "*The Story of Civilisation*" was about

[Question ID = 218]

1. his journey after he stepped on the shores of India for the first time

[Option ID = 869]

2. an emphatic work of compassion and outrage

[Option ID = 870]

3. the greatest crimes in all history

[Option ID = 871]

4. research on history through his journey around the world

[Option ID = 872]

Correct Answer :-

- research on history through his journey around the world

[Option ID = 872]

2) Instructions: Read the following passage and answer the questions that follow, by choosing the most appropriate option in question

In 1930, a young American historian and philosopher, Will Durant, stepped onto the shores of India for the first time. He had embarked on a journey around the world to write what became the magnificent eleven-volume story *The Story of Civilisation*. But, he was, in his own words, so "filled with astonishment and indignation" at what he saw and read of Britain's 'conscious and deliberate bleeding of India' that he set aside his research into the past and to write a passionate denunciation of this 'greatest crime in all history'. His short book, *The Case for India*, remains a classic, a profoundly emphatic work of compassion and outrage that tore apart the self-serving justifications of the British for their long and shameless record of rapacity in India.

In his short book "*The Case for India*" Durant expresses

[Question ID = 219]

1. the compassion and empathy shown by the British traders in India

[Option ID = 873]

2. his criticism of the avarice of the British traders and their hypocrisy

[Option ID = 874]

3. his wonderment at the bleeding of Indian by British invaders in

[Option ID = 875]

4. passionately his commendations for the greatest crimes in history

[Option ID = 876]

Correct Answer :-

- his criticism of the avarice of the British traders and their hypocrisy

[Option ID = 874]

3) Instructions: Read the following passage and answer the questions that follow, by choosing the most appropriate option in question
In 1930, a young American historian and philosopher, Will Durant, stepped onto the shores of India for the first time. He had embarked on a journey around the world to write what became the magnificent eleven-volume story *The Story of Civilisation*. But, he was, in his own words, so "filled with astonishment and indignation" at what he saw and read of Britain's 'conscious and deliberate bleeding of India' that he set aside his research into the past and to write a passionate denunciation of this 'greatest crime in all history'. His short book, *The Case for India*, remains a classic, a profoundly emphatic work of compassion and outrage that tore apart the self-serving justifications of the British for their long and shameless record of rapacity in India.

The British conquered a vast land by taking advantage of

[Question ID = 220]

1. disunity among States and the absence of stable central governance

[Option ID = 877]

2. India's power of artillery and cynicism of their amorality

[Option ID = 878]

3. the immoral means used by the warring principalities contending for authority

[Option ID = 879]

4. using the fleet and artillery brought by Will Durant to the shores of India

[Option ID = 880]

Correct Answer :-

- disunity among States and the absence of stable central governance

[Option ID = 877]

Topic:- Q25_Q27

1) Instructions: Choose the most appropriate answer from the four given options in question

It _____ came running into the classroom.

[Question ID = 221]

1. was he who [Option ID = 881]
2. was him whom [Option ID = 882]
3. was he whom [Option ID = 883]
4. was him who [Option ID = 884]

Correct Answer :-

- was he who [Option ID = 881]

2) Instructions: Choose the most appropriate answer from the four given options in question

My lawyers _____ the small print in the contract

[Question ID = 222]

1. are pouring over [Option ID = 885]
2. are poring over [Option ID = 886]
3. are poring on [Option ID = 887]
4. are pouring through [Option ID = 888]

Correct Answer :-

- are poring over [Option ID = 886]

3) Instructions: Choose the most appropriate answer from the four given options in question

None of us _____

[Question ID = 223]

1. is understanding the question [Option ID = 889]
2. understand the question [Option ID = 890]
3. understands the question [Option ID = 891]
4. are understanding the question [Option ID = 892]

Correct Answer :-

- understands the question [Option ID = 891]

Topic:- Q23_Q24

1) Instructions: Choose the antonym of the given word from the four alternatives that follow in question

Prosperous

[Question ID = 224]

1. Adverse

[Option ID = 893]

2. Affluent

[Option ID = 894]

3. Impecunious

[Option ID = 895]

4. advanced

[Option ID = 896]

Correct Answer :-

- Adverse

[Option ID = 893]

- Impecunious

[Option ID = 895]

2) Instructions: Choose the antonym of the given word from the four alternatives that follow in question

Obeying

[Question ID = 225]

1. Ordering

[Option ID = 897]

2. Refusing

[Option ID = 898]

3. Following

[Option ID = 899]

4. Contradicting

[Option ID = 900]

Correct Answer :-

- Refusing

[Option ID = 898]

Topic:- Q21_Q22

1) Instructions: Choose the synonym of the given word from the four alternatives that follow in question

Limpid

[Question ID = 226]

1. Decrepit

[Option ID = 901]

2. Incapacitated

[Option ID = 902]

3. Clear

[Option ID = 903]

4. Rapturous

[Option ID = 904]

Correct Answer :-

- Clear

[Option ID = 903]

2) Instructions: Choose the synonym of the given word from the four alternatives that follow in question

Onerous

[Question ID = 227]

1. Arduous

[Option ID = 905]

2. Loquacious

[Option ID = 906]

3. Righteous

[Option ID = 907]

4. Effortless

[Option ID = 908]

Correct Answer :-

- Arduous

[Option ID = 905]

Topic:- Q14_Q20

1) Identify the misspelt word:

[Question ID = 228]

1. accomodation [Option ID = 909]

2. acclimatise [Option ID = 910]

3. accumulate [Option ID = 911]
4. accreditation [Option ID = 912]

Correct Answer :-

- accomodation [Option ID = 909]

2) Identify the word that has been spelt correctly.

[Question ID = 229]

1. Concieted [Option ID = 913]
2. Konzervatory [Option ID = 914]
3. Connivance [Option ID = 915]
4. Congloromaration [Option ID = 916]

Correct Answer :-

- Connivance [Option ID = 915]

3) Choose the correct spelling:

[Question ID = 230]

1. Aquiesance [Option ID = 917]
2. Acquiescence [Option ID = 918]
3. Acqueiscance [Option ID = 919]
4. Acquiesence [Option ID = 920]

Correct Answer :-

- Acquiescence [Option ID = 918]

4) Choose the correct spelling:

[Question ID = 231]

1. Incquisition [Option ID = 921]
2. Enquisition [Option ID = 922]
3. Inquisition [Option ID = 923]
4. Inquisition [Option ID = 924]

Correct Answer :-

- Inquisition [Option ID = 924]

5) The proverb *Never look a gift horse in the mouth* means

[Question ID = 232]

1. It is better to stay away from other people's possessions
[Option ID = 925]
2. It is wise to maintain a distance from unfamiliar horses
[Option ID = 926]
3. We should never criticise a gift or be ungrateful for it
[Option ID = 927]
4. We should never act rashly in the face of danger

[Option ID = 928]

Correct Answer :-

- We should never criticise a gift or be ungrateful for it

[Option ID = 927]

6) He soon started to talk about the cost of new laptops which was a red herring because we already had sufficient laptops for our employees. What is the correct meaning of the underlined phrase?

[Question ID = 233]

1. refers to the bureaucracy that makes ordinary tasks difficult

[Option ID = 929]

2. refers to illegal transactions

[Option ID = 930]

3. using something insignificant to distract from the main topic

[Option ID = 931]

4. to point out that something can be a potential threat in the future

[Option ID = 932]

Correct Answer :-

- using something insignificant to distract from the main topic

[Option ID = 931]

7) Grandfather still gets up at 6 am every morning although he has retired and no longer needs to catch an early train to town.

I guess _____. (Choose the correct response to complete the sentence)

[Question ID = 234]

1. you are never too old to learn [Option ID = 933]

2. old habits die hard [Option ID = 934]

3. there's no fool like an old fool [Option ID = 935]

4. the early bird catches the worm [Option ID = 936]

Correct Answer :-

- old habits die hard [Option ID = 934]

Topic:- Q6_Q13

1) Choose the correct option:

No sooner had I got my bags unpacked did I realized that my camera was missing. (identify the incorrect part of the sentence)

[Question ID = 235]

1. No sooner had I got [Option ID = 937]
2. my bags unpacked [Option ID = 938]
3. did I realized that [Option ID = 939]
4. my camera was missing [Option ID = 940]

Correct Answer :-

- did I realized that [Option ID = 939]

2) Choose the correct option:

Mohit asked me not to accompany him to the meeting _____ he looked at me longingly as I left him in the room.

[Question ID = 236]

1. because [Option ID = 941]
2. but [Option ID = 942]
3. since [Option ID = 943]
4. so [Option ID = 944]

Correct Answer :-

- but [Option ID = 942]

3) Choose the correct option:

Tomorrow I have an important meeting in Pune. (identify the adverb)

[Question ID = 237]

1. tomorrow [Option ID = 945]
2. have [Option ID = 946]
3. important [Option ID = 947]
4. meeting [Option ID = 948]

Correct Answer :-

- tomorrow [Option ID = 945]

4) Choose the correct option:

The students of the home science class are making cookies today. (Identify the correct Passive form)

[Question ID = 238]

1. The students of the home science class were making cookies today. [Option ID = 949]
2. Cookies were being made by the students of the home science laboratory today. [Option ID = 950]
3. The students of the home science class were making cookies that day. [Option ID = 951]
4. Cookies are being made by the students of the home science class today. [Option ID = 952]

Correct Answer :-

- Cookies are being made by the students of the home science class today. [Option ID = 952]

5) Choose the correct option:

When they arrived, we _____ the test.

[Question ID = 239]

1. have already [Option ID = 953]
2. already started [Option ID = 954]
3. had already started [Option ID = 955]
4. already starting [Option ID = 956]

Correct Answer :-

- had already started [Option ID = 955]

6) Choose the correct option:

The young man asked, "Which way did he go?" (choose the correct reported form)

[Question ID = 240]

1. The young man asked which way did he go.
[Option ID = 957]
2. The young man asked which way he went.
[Option ID = 958]
3. The young man asked which way he has gone.
[Option ID = 959]
4. The young man asked which way he had gone.
[Option ID = 960]

Correct Answer :-

- The young man asked which way he had gone.
[Option ID = 960]

7) Choose the correct option:

The manager, along with the teacher, _____ at the meeting.

[Question ID = 241]

1. was present [Option ID = 961]
2. were presenting [Option ID = 962]
3. were present [Option ID = 963]
4. have been present [Option ID = 964]

Correct Answer :-

- was present [Option ID = 961]

8) Choose the correct option:

My project is due this Saturday. I have _____ time to spare.

[Question ID = 242]

1. few [Option ID = 965]

2. a little [Option ID = 966]
3. little [Option ID = 967]
4. much [Option ID = 968]

Correct Answer :-

- little [Option ID = 967]

Topic:- Q1_Q5

1) Read the passage given below and answer the five there after by choosing the most appropriate option:

For the last three decades or so, 50- year-old Diwani Ram, from the Bangapani region in Uttarakhand's Pithoragarh district, has helped thousands of people cross flooded rivulets during the monsoons, when heavy rains destroy bridges connecting nearby villages. But Ram - nicknamed 'Yamraj' because he would at times be seen riding his buffalo from place to place - is no ferryman. The intrepid farmer physically carries travellers on his back, transporting them across water through powerful currents, slippery rocks and unpredictable eddies to the other side.

" My father taught how to walk in deep waters when I turned 14, and since then I have been doing this work every season. Now, my son has joined me," he tell The *Better India*.

Many offer payment in return for his services, but Ram has ,more often then not, forgone remuneration, preferring to help stranded travellers, such as officers, tourists and locals, for free. With state machinery at work, rebuilding bridges, people may soon no longer need Ram's help, but the altruistic Yamraj- who was even elected Gram Prahari (village head) of Siling (2015 to 2019) - is sure to find other way to help his community.

Diwani Ram cannot be compared to a 'ferryman' because

[Question ID = 243]

1. he remains calm in all situations instead of hurrying people

[Option ID = 969]

2. he does not always depend on a ferry to help people

[Option ID = 970]

3. he does not know how to operate a ferry across flooded rivulets

[Option ID = 971]

4. he is called 'Yamraj' who uses a buffalo instead of a ferry

[Option ID = 972]

Correct Answer :-

- he does not always depend on a ferry to help people

[Option ID = 970]

2) Read the passage given below and answer the five there after by choosing the most appropriate option:

For the last three decades or so, 50- year-old Diwani Ram, from the Bangapani region in Uttarakhand's Pithoragarh district, has helped thousands of people cross flooded rivulets during the monsoons, when heavy rains destroy bridges connecting nearby villages. But Ram - nicknamed 'Yamraj' because he would at times be seen riding his buffalo from place to place - is no ferryman. The intrepid farmer physically carries travellers on his back, transporting them across water through powerful currents, slippery rocks and unpredictable eddies to the other side.

" My father taught how to walk in deep waters when I turned 14, and since then I have **been doing this work every season. Now, my son has joined me,**" he tell The *Better India*.

Many offer payment in return for his servces, but Ram has ,more often then not, forgone remuneration, preferring to help stranded travellers, such as officers,tourists and locals, for free. With state machinery at work, rebuilding bridges, people may soon no longer need Ram's help, but the altruistic Yamraj- who was even elected Gram Prahan(village head)of Siling(2015 to 2019) - is sure to find other way to help his community.

Which of the following is NOT TRUE about Diwani Ram and his noble deeds?

[Question ID = 244]

1. He is called Yamraj although that is not his real name

[Option ID = 973]

2. Ram has been assigned this responsibility of rescuing people by the government

[Option ID = 974]

3. This job of saving tourists and locals has become a family legacy and tradition now

[Option ID = 975]

4. He was appointed the Gram Pradhan

[Option ID = 976]

Correct Answer :-

- Ram has been assigned this responsibility of rescuing people by the government

[Option ID = 974]

3) Read the passage given below and answer the five there after by choosing the most appropriate option:

For the last three decades or so, 50- year-old Diwani Ram, from the Bangapani region in Uttarakhand's Pithoragarh district, has helped thousands of people cross flooded rivulets during the monsoons, when heavy rains destroy bridges connecting nearby villages. But Ram - nicknamed 'Yamraj' because he would at times be seen riding his buffalo from place to place - is no ferryman. The intrepid farmer physically carries travellers on his back, transporting them across water through powerful currents, slippery rocks and unpredictable eddies to the other side.

" My father taught how to walk in deep waters when I turned 14, and since then I have **been doing this work every season. Now, my son has joined me,**" he tell The *Better India*.

Many offer payment in return for his servces, but Ram has ,more often then not, forgone remuneration, preferring to help stranded travellers, such as officers,tourists and locals, for free. With state machinery at work, rebuilding bridges, people may soon no longer need Ram's help, but the altruistic Yamraj- who was even elected Gram Prahan(village head)of Siling(2015 to 2019) - is sure to find other way to help his community.

.

The fact that Ram has, more often than not, forgone remuneration, shows that

[Question ID = 245]

1. he is a manipulative man

[Option ID = 977]

2. he is a selfish man

[Option ID = 978]

3. he is a selfless man

[Option ID = 979]

4. he is a proud man

[Option ID = 980]

Correct Answer :-

- he is a selfless man

[Option ID = 979]

4)

Read the passage given below and answer the five there after by choosing the most appropriate option:

For the last three decades or so, 50- year-old Diwani Ram, from the Bangapani region in Uttarakhand's Pithoragarh district, has helped thousands of people cross flooded rivulets during the monsoons, when heavy rains destroy bridges connecting nearby villages. But Ram - nicknamed 'Yamraj' because he would at times be seen riding his buffalo from place to place - is no ferryman. The intrepid farmer physically carries travellers on his back, transporting them across water through powerful currents, slippery rocks and unpredictable eddies to the other side.

" My father taught how to walk in deep waters when I turned 14, and since then I have **been doing this work every season. Now, my son has joined me,**" he tell *The Better India*.

Many offer payment in return for his servces, but Ram has ,more often then not, forgone remuneration, preferring to help stranded travellers, such as officers,tourists and locals, for free. With state machinery at work, rebuilding bridges, people may soon no longer need Ram's help, but the altruistic Yamraj- who was even elected Gram Prahan(village head)of Siling(2015 to 2019) - is sure to find other way to help his community.

Diwani Ram has been described as an intrepid farmer, which means that he is

[Question ID = 246]

1. kind

[Option ID = 981]

2. sensible

[Option ID = 982]

3. ordinary

[Option ID = 983]

4. courageous

[Option ID = 984]

Correct Answer :-

- courageous

[Option ID = 984]

5)

Read the passage given below and answer the five there after by choosing the most appropriate option:

For the last three decades or so, 50- year-old Diwani Ram, from the Bangapani region in Uttarakhand's Pithoragarh district, has helped thousands of people cross flooded rivulets during the monsoons, when heavy rains destroy bridges connecting nearby villages. But Ram - nicknamed 'Yamraj' because he would at times be seen riding his buffalo from place to place - is no ferryman. The intrepid farmer physically carries travellers on his back, transporting them across water through powerful currents, slippery rocks and unpredictable eddies to the other side.

" My father taught how to walk in deep waters when I turned 14, and since then I have **been doing this work every season. Now, my son has joined me,**" he tell *The Better India*.

Many offer payment in return for his servces, but Ram has ,more often then not, forgone remuneration, preferring to help stranded travellers, such as officers,tourists and locals, for free. With state machinery at work, rebuilding bridges, people may soon no longer need Ram's help, but the altruistic Yamraj- who was even elected Gram Prahan(village head)of Siling(2015 to 2019) - is sure to find other way to help his community.

What does the word 'altruistic' in the phrase 'the altruistic Yamraj' mean?

[Question ID = 247]

1. Courageous

[Option ID = 985]

2. Determined

[Option ID = 986]

3. Philanthropic

[Option ID = 987]

4. Ambitious

[Option ID = 988]

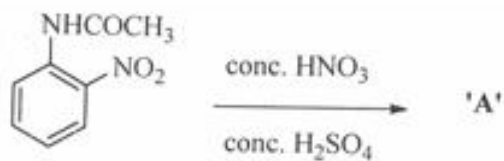
Correct Answer :-

- Philanthropic

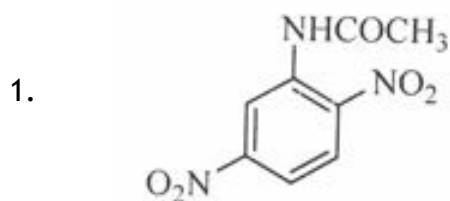
[Option ID = 987]

Topic:- NTAFNCON_Oct20_Chem

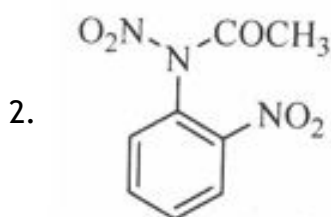
1) The major product A obtained in the following reaction is



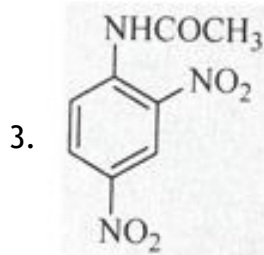
[Question ID = 248]



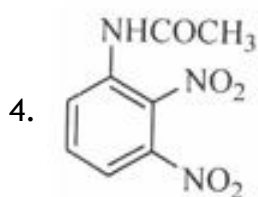
[Option ID = 989]



[Option ID = 990]

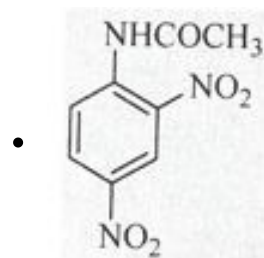


[Option ID = 991]



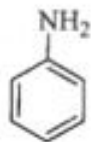
[Option ID = 992]

Correct Answer :-



[Option ID = 991]

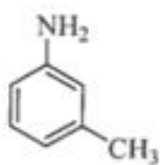
2) Among the following, the strongest base is



(I)



(II)



(III)



(IV)

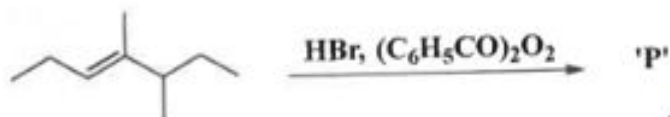
[Question ID = 249]

1. I [Option ID = 993]
2. II [Option ID = 994]
3. III [Option ID = 995]
4. IV [Option ID = 996]

Correct Answer :-

- IV [Option ID = 996]

3) The number of asymmetric carbons present in the product P is



[Question ID = 250]

1. 2 [Option ID = 997]
2. 3 [Option ID = 998]
3. 4 [Option ID = 999]
4. 5 [Option ID = 1000]

Correct Answer :-

- 3 [Option ID = 998]

4) Out of the following compounds, which one has the highest boiling point?

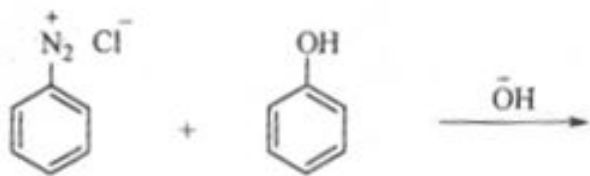
[Question ID = 251]

1. Butanal [Option ID = 1001]
2. Diethyl ether [Option ID = 1002]
3. Butan-1-ol [Option ID = 1003]
4. Butan-2-ol [Option ID = 1004]

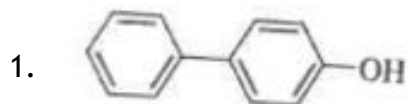
Correct Answer :-

- Butan-1-ol [Option ID = 1003]

5) The major product in the following reaction is



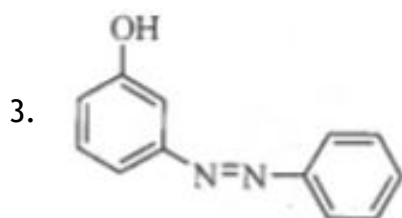
[Question ID = 252]



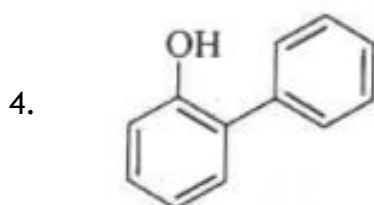
[Option ID = 1005]



[Option ID = 1006]

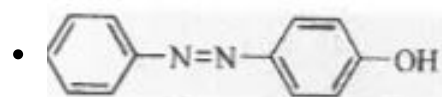


[Option ID = 1007]



[Option ID = 1008]

Correct Answer :-



[Option ID = 1006]

6) Which one of the following compounds is aromatic in nature?

[Question ID = 253]



[Option ID = 1009]

2.



[Option ID = 1010]

3.



[Option ID = 1011]

4.



[Option ID = 1012]

Correct Answer :-

•

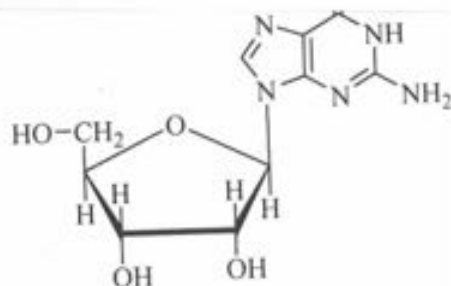


[Option ID = 1010]

7) Which one of the following is the correct structure of a nucleoside formed by linking of guanine to β -D-2-deoxyribose?

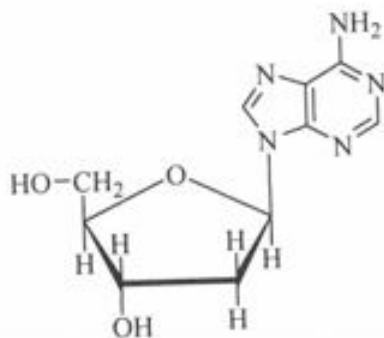
[Question ID = 254]

1.



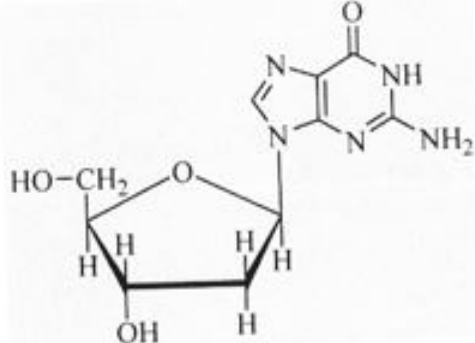
[Option ID = 1013]

2.



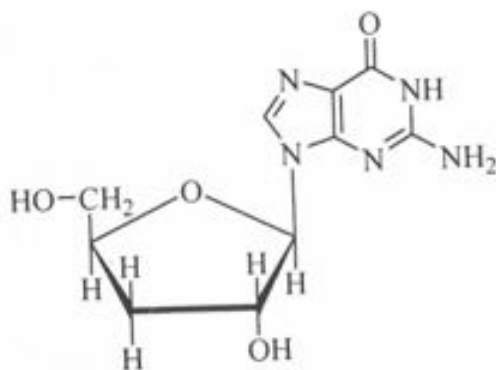
[Option ID = 1014]

3.



[Option ID = 1015]

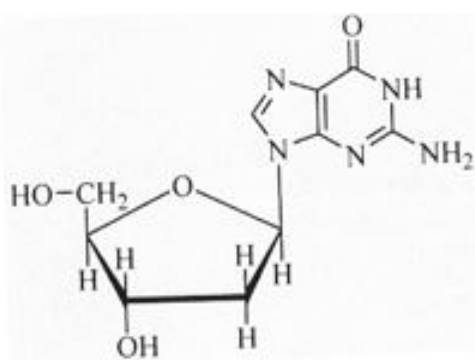
4.



[Option ID = 1016]

Correct Answer :-

•



[Option ID = 1015]

8) Identify the condensation polymer out of the following.

[Question ID = 255]

1. Teflon [Option ID = 1017]
2. Dacron [Option ID = 1018]
3. Rubber [Option ID = 1019]
4. Polyvinyl chloride [Option ID = 1020]

Correct Answer :-

- Dacron [Option ID = 1018]

9) Out of the following amino acids, the one which is basic in nature is

[Question ID = 256]

1. Methionine

[Option ID = 1021]

2. Tyrosine

[Option ID = 1022]

3. Histidine

[Option ID = 1023]

4. Serine

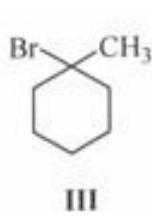
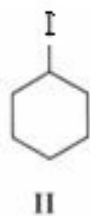
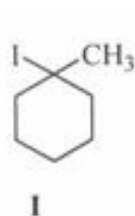
[Option ID = 1024]

Correct Answer :-

- Histidine

[Option ID = 1023]

10) Out of the following, the compound which is most reactive towards S_N2 reaction with hydroxide ion is



[Question ID = 257]

1. I

[Option ID = 1025]

2. II

[Option ID = 1026]

3. III

[Option ID = 1027]

4. IV

[Option ID = 1028]

Correct Answer :-

- II

[Option ID = 1026]

11) Which one of the following compounds is both a Lewis acid and a Lewis base?

[Question ID = 258]

1. $AlCl_3$

[Option ID = 1029]

2. SiF_4

[Option ID = 1030]

3. SnCl_2

[Option ID = 1031]

4. SbF_5

[Option ID = 1032]

Correct Answer :-

- SnCl_2

[Option ID = 1031]

12) Which of the following is a primary standard?

[Question ID = 259]

1. $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ [Option ID = 1033]

2. $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ [Option ID = 1034]

3. EDTA [Option ID = 1035]

4. NaOH [Option ID = 1036]

Correct Answer :-

- $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ [Option ID = 1033]

13) The correct order of the electron affinity for one-electron gain is

[Question ID = 260]

1. $\text{S} > \text{Se} > \text{O}$ [Option ID = 1037]

2. $\text{O} > \text{S} > \text{Se}$ [Option ID = 1038]

3. $\text{S} > \text{O} > \text{Se}$ [Option ID = 1039]

4. $\text{Se} > \text{S} > \text{O}$ [Option ID = 1040]

Correct Answer :-

- $\text{S} > \text{Se} > \text{O}$ [Option ID = 1037]

14) The compound used commonly in green coloured fireworks is

[Question ID = 261]

1. BaCl_2 [Option ID = 1041]

2. CrCl_3 [Option ID = 1042]

3. CuCl_2 [Option ID = 1043]

4. NiCl_2 [Option ID = 1044]

Correct Answer :-

- BaCl_2 [Option ID = 1041]

15) The molality (in mol kg^{-1}) of a 28.75% (v/v) solution of ethanol ($\text{C}_2\text{H}_5\text{OH}$) in water is [Given: Density of ethanol is 0.8 g/mL & density of water is 1 g/mL]

[Question ID = 262]

1. 17.1

[Option ID = 1045]

2. 1.71

[Option ID = 1046]

3. 7.02

[Option ID = 1047]

4. 0.71

[Option ID = 1048]

Correct Answer :-

- 7.02

[Option ID = 1047]

16) For Z vs p plot of gases at a constant temperature, which of the following statements is incorrect?

[Question ID = 263]

1. For ideal gases, the plot is a straight line with slope equal to 0.

[Option ID = 1049]

2. For dihydrogen, as the pressure increases, the value of Z also increases.

[Option ID = 1050]

3. At low values of pressure ($p < 200 \text{ bar}$), methane shows negative deviation from ideality and the Z value decreases with increases in pressure.

[Option ID = 1051]

4. For helium, as the pressure decreases, the value of Z increases.

[Option ID = 1052]

Correct Answer :-

- For helium, as the pressure decreases, the value of Z increases.

[Option ID = 1052]

17) If water vapour behaves as perfect gas, the internal energy (kJ) of vaporization for 360 g of water at 298 K is (Given: $\Delta_{\text{vap}}H^\circ$ for water at 298 K = 44 kJ mol^{-1})

[Question ID = 264]

1. -48671.4

[Option ID = 1053]

2. -830.45

[Option ID = 1054]

3. 48671.4

[Option ID = 1055]

4. 830.45

[Option ID = 1056]

Correct Answer :-

- 830.45

[Option ID = 1056]

18) Choose the correct statement from the following.

[Question ID = 265]

1. Among halogens, fluorine does not show a disproportionation tendency.

[Option ID = 1057]

2. The average oxidation number of bromine in Br_3O_3 is 18/3

[Option ID = 1058]

3. In the reaction, $2\text{Cu}_2\text{O} (\text{s}) + \text{Cu}_2\text{S} (\text{s}) \rightarrow 6\text{Cu} (\text{s}) + \text{SO}_2 (\text{g})$, $\text{Cu}(\text{I})$ is the reductant.

[Option ID = 1059]

4. The reaction $\text{NaH} (\text{s}) + \text{H}_2\text{O} (\text{l}) \rightarrow \text{NaOH} (\text{aq}) + \text{H}_2 (\text{g})$ is an example of combination redox reaction

[Option ID = 1060]

Correct Answer :-

- Among halogens, fluorine does not show a disproportionation tendency.

[Option ID = 1057]

19) Match the reactions/processes given in Column I to the catalyst that facilitates the reaction/process given in Column II.

Column I

I. $\text{CO} (\text{g}) + 2\text{H}_2 (\text{g}) \rightarrow \text{CH}_3\text{OH} (\text{g})$

II. Contact process for production of sulphuric acid (s)

III. $4\text{NH}_3 (\text{g}) + 5\text{O}_2 (\text{g}) \rightarrow 4\text{NO} (\text{g}) + 6\text{H}_2\text{O} (\text{g})$ (Ostwald's process)
 $\text{Cu/ZnO} - \text{Cr}_2\text{O}_3$

IV. Vegetable oils (l) + $\text{H}_2 (\text{g}) \rightarrow$ Vegetable ghee (s)
Platinised asbestos or V_2O_5

Column II

a. Pt (s)

b. Ni

c.

d.

The Correct match is

[Question ID = 266]

1. I-c ; II-d; III-b; IV-a

[Option ID = 1061]

2. I-c ; II-d ; III-a ; IV-b

[Option ID = 1062]

3. I-d ; II-c ; III-a ; IV-b

[Option ID = 1063]

4. I-d ; II-b ; III-a ; IV-c

[Option ID = 1064]

Correct Answer :-

- I-c ; II-d ; III-a ; IV-b

[Option ID = 1062]

20) The reversible physisorption of a gas by a solid is an exothermic reaction. Incorrect statement for it from the following is

[Question ID = 267]

1. More of gas is adsorbed when pressure is increased.

[Option ID = 1065]

2. The physisorption occurs readily at high temperature.

[Option ID = 1066]

3. The physisorption occurs readily at low temperature and decreases with increase in temperature.

[Option ID = 1067]

4. Easily liquefiable gases are readily physisorbed on the surface of solid.

[Option ID = 1068]

Correct Answer :-

- The physisorption occurs readily at high temperature.

[Option ID = 1066]

21) Which one of the following statements is incorrect?

[Question ID = 268]

1. Fullerenes have smooth structure without dangling bond.

[Option ID = 1069]

2. Graphite is used as a dry lubricant.

[Option ID = 1070]

3. The order of $\Delta_f H^\ominus$ for the allotropes of carbon is Graphite < fullerene < diamond.

[Option ID = 1071]

4. Diamond is used in the manufacturing of tungsten filaments for electric light bulbs.

[Option ID = 1072]

Correct Answer :-

- The order of $\Delta_f H^\ominus$ for the allotropes of carbon is Graphite < fullerene < diamond.

[Option ID = 1071]

22) Match the compound from column I with its use from column II and select correct option

Column I

a H_2O_2

b D_2O

c H_2

d $PdH_{0.6-0.8}$

Column II

i) manufacture of metal hydrides

ii) sewage treatment

iii) source of energy and H_2 storage

iv) study of reaction mechanism.

[Question ID = 269]

1. a-(i), b-(ii), c-(iii), d-(iv)

[Option ID = 1073]

2. a-(iv), b-(iii), c-(i), d-(ii)

[Option ID = 1074]

3. a-(iv), b-(ii), c-(iii), d-(i)

[Option ID = 1075]

4. a-(ii), b-(iv), c-(i), d-(iii)

[Option ID = 1076]

Correct Answer :-

- a-(ii), b-(iv), c-(i), d-(iii)

[Option ID = 1076]

23) Which one of the following statements is incorrect about O^{2-} , F^- , Na^+ , Mg^{2+}

[Question ID = 270]

1. O^{2-} , F^- , Na^+ and Mg^{2+} are isoelectronic species.

[Option ID = 1077]

2. Mg^{2+} will have smallest ionic radius due to weaker attraction of electrons by nucleus.

[Option ID = 1078]

3. O^{2-} will have larger radius

[Option ID = 1079]

4. All these species have 10 electrons.

[Option ID = 1080]

Correct Answer :-

- Mg^{2+} will have smallest ionic radius due to weaker attraction of electrons by nucleus.

[Option ID = 1078]

24) Which of the following species will be weakly repelled by magnetic field?

[Question ID = 271]

1. O_2

[Option ID = 1081]

2. O_2^{2-}

[Option ID = 1082]

3. O_2^-

[Option ID = 1083]

4. O_2^+

[Option ID = 1084]

Correct Answer :-

- O_2^{2-}

[Option ID = 1082]

25) Match the elements from column I and their application in Column II and Select correct option.

Column I	Column II
a) TiO_2	i) oxidation of SO_2
b) AgBr	ii) wacker process
c) V_2O_5	iii) Pigment industry
d) PdCl_2	iv) Photographic industry

[Question ID = 272]

1. a-(iii), b-(i), c-(iv), d-(ii)

[Option ID = 1085]

2. a-(iii), b-(iv), c-(i), d-(ii)

[Option ID = 1086]

3. a-(i), b-(ii), c-(iv), d-(iii)

[Option ID = 1087]

4. a-(iii), b-(ii), c-(iv), d-(i)

[Option ID = 1088]

Correct Answer :-

- a-(iii), b-(iv), c-(i), d-(ii)

[Option ID = 1086]

26) What is the magnetic moment (BM) of a divalent ion (X) in aqueous solution? (Given atomic number X = 26)

[Question ID = 273]

1. 6.93

[Option ID = 1089]

2. 4.90

[Option ID = 1090]

3. 5.92

[Option ID = 1091]

4. 7.91

[Option ID = 1092]

Correct Answer :-

- 4.90

[Option ID = 1090]

27) Which one of the following statements is incorrect?

[Question ID = 274]

1. Greater the surface area greater will be the energy state of a liquid.

[Option ID = 1093]

2. Fire polishing of glass reduces the surface tension.

[Option ID = 1094]

3. Surface tension is denoted by γ and has unit of Nm^{-1} .

[Option ID = 1095]

4. Surface tension decreases with decrease in temperature.

[Option ID = 1096]

Correct Answer :-

- Surface tension decreases with decrease in temperature.

[Option ID = 1096]

28)

Which of the following are disproportionate reactions?

- a) $\text{Cl}_2(\text{g}) + 2\text{OH}^-(\text{aq}) \rightarrow \text{ClO}^-(\text{aq}) + \text{Cl}^-(\text{aq}) + \text{H}_2\text{O}(\text{l})$
- b) $2\text{F}_2(\text{g}) + 2\text{OH}^-(\text{aq}) \rightarrow 2\text{F}^-(\text{aq}) + \text{OF}_2(\text{g}) + \text{H}_2\text{O}(\text{l})$
- c) $2\text{H}_2\text{O}_2(\text{aq}) \rightarrow 2\text{H}_2\text{O}(\text{l}) + \text{O}_2(\text{g})$
- d) $\text{Cl}_2(\text{g}) + 2\text{KBr}(\text{aq}) \rightarrow 2\text{KCl}(\text{aq}) + \text{Br}_2(\text{l})$

[Question ID = 275]

1. a, b and c

[Option ID = 1097]

2. a, c and d

[Option ID = 1098]

3. a and c

[Option ID = 1099]

4. b and c

[Option ID = 1100]

Correct Answer :-

- a and c

[Option ID = 1099]

29) Which one of the following statements is incorrect about Ellingham diagram?

[Question ID = 276]

1. It is normally a plot of $\Delta_r G^\ominus$ vs T for the formation of oxides, sulfides.

[Option ID = 1101]

2. Each plot is a straight line and slopes upwards except when some changes in phase.

[Option ID = 1102]

3. At a particular temperature the line crosses $\Delta_r G^\ominus = 0$ line, which means that above this temperature formation of oxide is stable.

[Option ID = 1103]

4. The graph simply indicates whether a reaction is possible.

[Option ID = 1104]

Correct Answer :-

- At a particular temperature the line crosses $\Delta_r G^\ominus = 0$ line, which means that above this temperature formation of oxide is stable.

[Option ID = 1103]

30) What is the value of K_C for a reaction $2\text{A}(\text{g}) + \text{B}(\text{g}) \rightleftharpoons 2\text{C}(\text{g})$, if the equilibrium concentration of each substance is

[A] = 0.4, [B] = 0.82, [C] = 0.24.

[Question ID = 277]

1. 0.75

[Option ID = 1105]

2. 0.443

[Option ID = 1106]

3. 4.43

[Option ID = 1107]

4. 7.5

[Option ID = 1108]

Correct Answer :-

- 0.443

[Option ID = 1106]

Topic:- NTA FNCON_Oct20_Phy

1) The dimension of kinetic energy is

[Question ID = 278]

1. $[MLT^{-2}]$

[Option ID = 1109]

2. $[MLT^{-1}]$

[Option ID = 1110]

3. $[ML^2T^{-2}]$

[Option ID = 1111]

4. $[ML^2T^{-1}]$

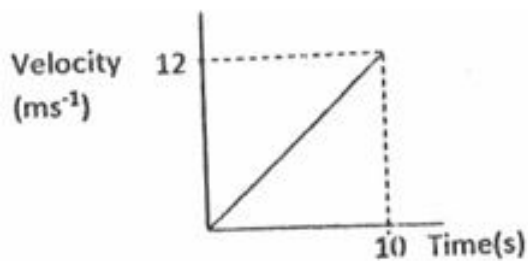
[Option ID = 1112]

Correct Answer :-

- $[ML^2T^{-2}]$

[Option ID = 1111]

2) The velocity-time graph of a particle in one dimensional motion is shown in the Figure below. The distance traveled by the particle between time 0s to 10s is



[Question ID = 279]

1. 60m

[Option ID = 1113]

2. 120m

[Option ID = 1114]

3. 600m

[Option ID = 1115]

4. 1200m

[Option ID = 1116]

Correct Answer :-

- 60m

[Option ID = 1113]

3) Four algebraic operations with scalar and vector quantities are listed below. Which one amongst them is NOT meaningful?

[Question ID = 280]

1. Adding two vectors with same dimension

[Option ID = 1117]

2. Multiplying any vector by any scalar

[Option ID = 1118]

3. Adding a scalar to a vector of same dimension

[Option ID = 1119]

4. Adding any two scales with same dimension

[Option ID = 1120]

Correct Answer :-

- Adding a scalar to a vector of same dimension

[Option ID = 1119]

4) A body is initially at rest. It undergoes motion in one dimension with a constant force. The power delivered to it at time 't' is proportional to

[Question ID = 281]

1. $t^{1/2}$

[Option ID = 1121]

2. t

[Option ID = 1122]

3. $t^{3/2}$

[Option ID = 1123]

4. t^2

[Option ID = 1124]

Correct Answer :-

- t

[Option ID = 1122]

5) The number of significant Figure in 0.2380 gm^{-3} is

[Question ID = 282]

1. 5

[Option ID = 1125]

2. 3

[Option ID = 1126]

3. 4

[Option ID = 1127]

4. 6

[Option ID = 1128]

Correct Answer :-

- 4

[Option ID = 1127]

6) The angular velocity of a geostationary satellite is

[Question ID = 283]

1. $\pi/43200$

[Option ID = 1129]

2. $\pi/86400$

[Option ID = 1130]

3. 43200π

[Option ID = 1131]

4. 86400π

[Option ID = 1132]

Correct Answer :-

- $\pi/43200$

[Option ID = 1129]

7) The kinetic energy of an orbiting satellite is

[Question ID = 284]

1. equal to its potential energy

[Option ID = 1133]

2. half of its potential energy

[Option ID = 1134]

3. half of its potential energy with negative sign

[Option ID = 1135]

4. twice its potential energy with negative sign

[Option ID = 1136]

Correct Answer :-

- half of its potential energy with negative sign

[Option ID = 1135]

8) An infinitely long straight uniformly charged wire has linear charge density λ . Then the electric field due to the wire at a radial distance r will be (ϵ_0 = permittivity of free space)

[Question ID = 285]

1. $\lambda/2\pi\epsilon_0 r$

[Option ID = 1137]

2. $\lambda/ \epsilon^0 r$

[Option ID = 1138]

3. $\lambda/4\pi\epsilon^0 r$

[Option ID = 1139]

4. $\lambda/ 2\epsilon^0$

[Option ID = 1140]

Correct Answer :-

- $\lambda/2\pi\epsilon_0 r$

[Option ID = 1137]

9) For making permanent magnet, we need to choose materials having

[Question ID = 286]

1. high retentivity and low coercivity

[Option ID = 1141]

2. low retentivity and high coercivity

[Option ID = 1142]

3. low retentivity and low coercivity

[Option ID = 1143]

4. high retentivity and high coercivity

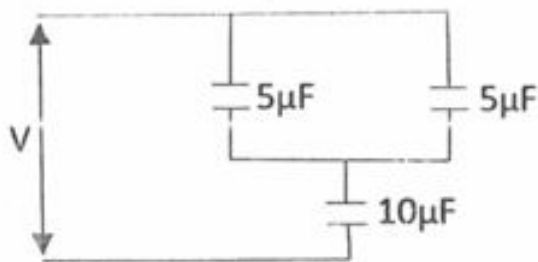
[Option ID = 1144]

Correct Answer :-

- high retentivity and high coercivity

[Option ID = 1144]

10) The equivalent capacitance for the combination of capacitances shown in the Figure across which potential difference V is applied, will be



[Question ID = 287]

1. $20\mu\text{F}$

[Option ID = 1145]

2. $15\mu\text{F}$

[Option ID = 1146]

3. $10\mu\text{F}$

[Option ID = 1147]

4. $5\mu\text{F}$

[Option ID = 1148]

Correct Answer :-

- $5\mu\text{F}$

[Option ID = 1148]

11) A ray of light enters from rarer to a denser medium at angle of incidence 45° . The physical parameter that will NOT change will be

[Question ID = 288]

1. Velocity

[Option ID = 1149]

2. Wavelength

[Option ID = 1150]

3. Frequency

[Option ID = 1151]

4. Direction of propagation

[Option ID = 1152]

Correct Answer :-

- Frequency

[Option ID = 1151]

12) The radius R of a nucleus with mass number A is expressed as

[Question ID = 289]

1. $R \propto A$ [Option ID = 1153]

2. $R \propto A^{1/2}$ [Option ID = 1154]

3. $R \propto A^{1/3}$ [Option ID = 1155]

4. $R \propto A^{1/4}$ [Option ID = 1156]

Correct Answer :-

- $R \propto A^{1/3}$ [Option ID = 1155]

13) A body having kinetic energy K , moving on a rough surface is stopped at a distance X . The force of friction exerted on the body will be

[Question ID = 290]

1. Kx

[Option ID = 1157]

2. K/X

[Option ID = 1158]

3. $\sqrt{k/x}$

[Option ID = 1159]

4. $K/\sqrt{X}$

[Option ID = 1160]

Correct Answer :-

- K/X

[Option ID = 1158]

14) The magnetic field at the centre of a circular loop of R and carrying current I is given by the expression, (μ_0 = permeability of free space)

[Question ID = 291]

1. $I/2\pi\mu_0R$

[Option ID = 1161]

2. $\mu_0 I/2\pi R$

[Option ID = 1162]

3. $\mu_0 I/2R$

[Option ID = 1163]

4. $\mu_0 I/\pi R$

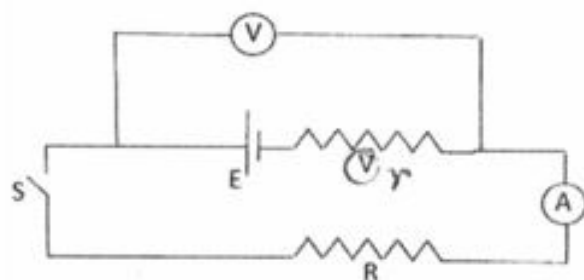
[Option ID = 1164]

Correct Answer :-

• $\mu_0 I/2R$

[Option ID = 1163]

15) In the circuit shown below, voltmeter reads 9V and ammeter reads 0A when switch S is open. When the switch is closed, the voltmeter reads 8V and ammeter reads 1A. The values of E and r are respectively,



[Question ID = 292]

1. 9V, 0.1 Ω

[Option ID = 1165]

2. 8V, 0.1 Ω

[Option ID = 1166]

3. 9V, 1 Ω

[Option ID = 1167]

4. 8V, 1 Ω

[Option ID = 1168]

Correct Answer :-

- 9V, 1Ω

[Option ID = 1167]

16) A charged particle having charge q and mass m , respectively is accelerated by a cyclotron having magnetic field strength B . The frequency of revolution of the charged particle is given by the expression

[Question ID = 293]

1. $2\pi m/qB$

[Option ID = 1169]

2. $qB/2\pi m$

[Option ID = 1170]

3. $\pi m/qB$

[Option ID = 1171]

4. $qB/\pi m$

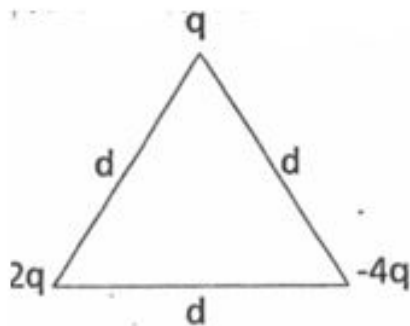
[Option ID = 1172]

Correct Answer :-

- $qB/2\pi m$

[Option ID = 1170]

17) Figure show three point charges held in fixed position by low force. The electric potential U of the system of charges will be (ϵ_0 = permittivity of free space)



[Question ID = 294]

1. $-\frac{q^2}{4\pi\epsilon_0 d}$

[Option ID = 1173]

2. $-\frac{10q^2}{4\pi\epsilon_0 d}$

[Option ID = 1174]

3.
$$\frac{10q^2}{4\pi\epsilon_0 d}$$

[Option ID = 1175]

4.
$$\frac{q^2}{4\pi\epsilon_0 d}$$

[Option ID = 1176]

Correct Answer :-

•
$$-\frac{10q^2}{4\pi\epsilon_0 d}$$

[Option ID = 1174]

18) Light of wavelength 6000° A is coming from a star. The limit of resolution of a telescope whose objective has a diameter of 200 cm, will be

[Question ID = 295]

1. $3.66 \times 10^{-5} \text{ rad}$

[Option ID = 1177]

2. $3.66 \times 10^{-7} \text{ rad}$

[Option ID = 1178]

3. $3.66 \times 10^{-4} \text{ rad}$

[Option ID = 1179]

4. $3.66 \times 10^{-6} \text{ rad}$

[Option ID = 1180]

Correct Answer :-

• $3.66 \times 10^{-7} \text{ rad}$

[Option ID = 1178]

19) An electron (mass $9 \times 10^{-31} \text{ kg}$ and charge $1.6 \times 10^{-19} \text{ c}$) moves at a speed of $3.2 \times 10^7 \text{ m/s}$ in a magnetic field of $6 \times 10^{-4} \text{ T}$ perpendicular to it. The radius of the path described by the electron will be

[Question ID = 296]

1. $3 \times 10^{-3} \text{ m}$

[Option ID = 1181]

2. $3 \times 10^{-2} \text{ m}$

[Option ID = 1182]

3. 3 m

[Option ID = 1183]

4. 3×10^{-1} m

[Option ID = 1184]

Correct Answer :-

- 3×10^{-2} m

[Option ID = 1182]

20) Light from a point source in air falls on a spherical glass surface with refractive index 1.5 and radius of curvature 20 cm. The distance of the light source from the glass surface is 80 cm. The image distance will be

[Question ID = 297]

1. 80 cm

[Option ID = 1185]

2. 120 cm

[Option ID = 1186]

3. 40 cm

[Option ID = 1187]

4. 100 cm

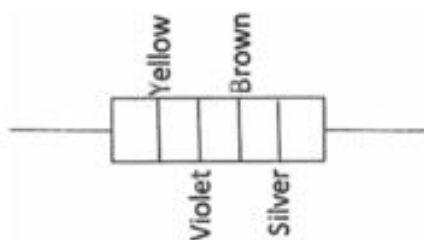
[Option ID = 1188]

Correct Answer :-

- 120 cm

[Option ID = 1186]

21) The resistor shown in the Figure below has the value as



[Question ID = 298]

1. $(36 \times 10^4 \pm 5\%) \Omega$

[Option ID = 1189]

2. $(36 \times 10^3 \pm 5\%) \Omega$

[Option ID = 1190]

3. $(36 \times 10^4 \mp 10\%) \Omega$

[Option ID = 1191]

4. $(36 \times 10^3 \mp 10\%) \Omega$

[Option ID = 1192]

Correct Answer :-

- $(36 \times 10^4 \mp 10\%) \Omega$

[Option ID = 1191]

22) The dimensional formula for electrical potential is

[Question ID = 299]

1. $M^{-1}L^{-2}T^{-4}A^2$

[Option ID = 1193]

2. $MLT^{-3}A^{-1}$

[Option ID = 1194]

3. $ML^2T^3A^{-1}$

[Option ID = 1195]

4. $ML^3T^{-3}A^{-1}$

[Option ID = 1196]

Correct Answer :-

- $ML^2T^3A^{-1}$

[Option ID = 1195]

23) In the circuit shown below, the values of I_1 and I_2 will respectively, be

[Question ID = 300]

1. $3I/4, I/4$

[Option ID = 1197]

2. $I/4, 3I/4$

[Option ID = 1198]

3. $2I/3, I/3$

[Option ID = 1199]

4. $1/3, 2I/3$

[Option ID = 1200]

Correct Answer :-

24)

Two amplifiers are connected one after the other in series (cascaded). The first amplifier has a voltage gain of 10 and the second has a voltage gain of 20. If the input signal is 0.01 volt, the output ac signal will be

[Question ID = 301]

1. 0.2V

[Option ID = 1201]

2. 0.3V

[Option ID = 1202]

3. 2V

[Option ID = 1203]

4. 3V

[Option ID = 1204]

Correct Answer :-

- 2V

[Option ID = 1203]

25) According to Bernoulli's principle, for a streamlined flow of an ideal fluid, the total energy per unit mass remains constant at every cross-section throughout the liquid flow. This total energy consists of,

[Question ID = 302]

1. kinetic energy

[Option ID = 1205]

2. kinetic and potential energy

[Option ID = 1206]

3. potential and pressure energy

[Option ID = 1207]

4. kinetic, potential and pressure energy.

[Option ID = 1208]

Correct Answer :-

- kinetic, potential and pressure energy.

[Option ID = 1208]

26) Excess pressure inside a soap bubble of radius R is (T = surface tension),

[Question ID = 303]

1. $2T/R$

[Option ID = 1209]

2. $4T/R$

[Option ID = 1210]

3. $2R/T$

[Option ID = 1211]

4. $4R/T$

[Option ID = 1212]

Correct Answer :-

- $4T/R$

[Option ID = 1210]

27) For an ideal gas molecule, its average translational kinetic energy at a temperature T is given by, (k = Boltzman constant)

[Question ID = 304]

1. $\frac{1}{2}kT$

[Option ID = 1213]

2. $\frac{3}{2}kT$

[Option ID = 1214]

3. $2kT$

[Option ID = 1215]

4. $\frac{2}{3}kT$

[Option ID = 1216]

Correct Answer :-

- $\frac{3}{2}kT$

[Option ID = 1214]

28) A radioactive material has half-life of 2 years. If we take 100g of the material, after 10 years, the amount of undecayed material will be

[Question ID = 305]

1. 20 g

[Option ID = 1217]

2. 10 g

[Option ID = 1218]

3. 5 g

[Option ID = 1219]

4. 3.125 g

[Option ID = 1220]

Correct Answer :-

- 3.125 g

[Option ID = 1220]

29) For a monoatomic gas, the values of molar specific heat at constant volume (C_v) and molar specific heat at constant pressure (C_p) are ,respectively (R = universal gas constant).

[Question ID = 307]

1. $\frac{5}{2}R, \frac{7}{2}R$

[Option ID = 1225]

2. $\frac{5}{2}R, \frac{3}{2}R$

[Option ID = 1226]

3. $\frac{3}{2}R, \frac{5}{2}R$

[Option ID = 1227]

4. $\frac{7}{2}R, \frac{5}{2}R$

[Option ID = 1228]

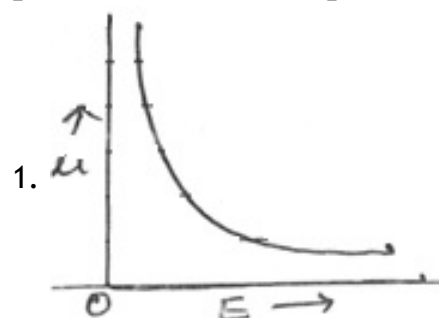
Correct Answer :-

- $\frac{3}{2}R, \frac{5}{2}R$

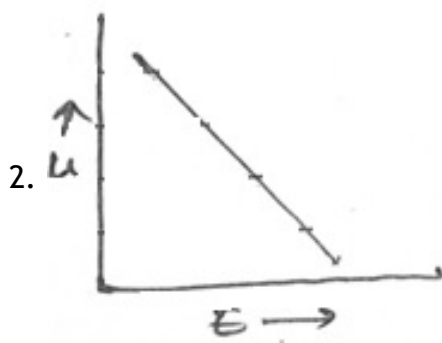
[Option ID = 1227]

30) Which one of the following graphs, depicts the correct variation of electron mobility in a conductor with applied Electric field?

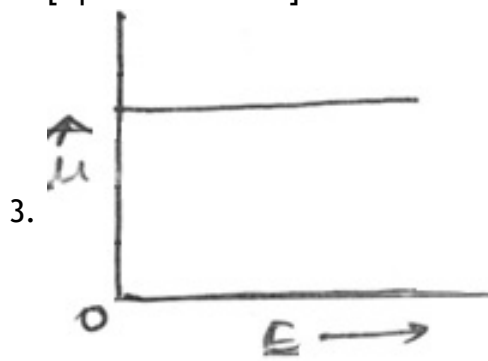
[Question ID = 309]



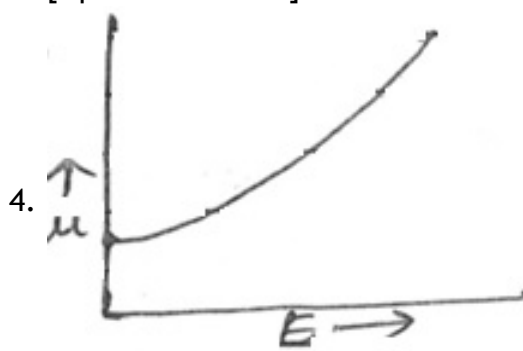
[Option ID = 1233]



[Option ID = 1234]

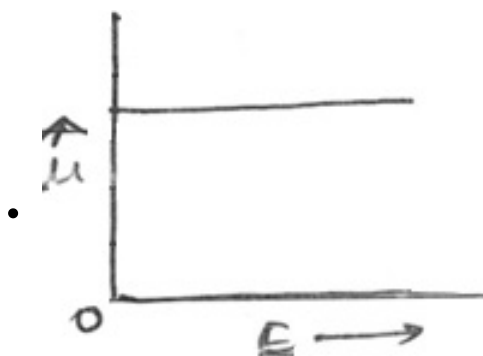


[Option ID = 1235]



[Option ID = 1236]

Correct Answer :-



[Option ID = 1235]