

Graduate Pharmacy Aptitude Test

1011 New

Topic:- Other subjects Set01

1) A technique of using very small metal particles coated with desired DNA in the gene transfer is called:-

[Question ID = 591]

1. Microinjection [Option ID = 2360]
2. Biolistic [Option ID = 2361]
3. Liposome mediated [Option ID = 2362]
4. Electroporation [Option ID = 2363]

Correct Answer :-

- Biolistic [Option ID = 2361]

2) Arrange the following steps in sequence of their order for production of recombinant Insulin:-

- a. Fusion of A and B chains for disulphide bond.
- b. Cynogen bromide treatment to remove methionine and β galactosidase.
- c. Introduction of A and B chain in the plasmid containing β galactosidase gene.
- d. Synthesis of A and B chain in *E coli*.

[Question ID = 592]

1. a \rightarrow b \rightarrow d \rightarrow c [Option ID = 2364]
2. d \rightarrow c \rightarrow a \rightarrow b [Option ID = 2365]
3. c \rightarrow d \rightarrow b \rightarrow a [Option ID = 2366]
4. b \rightarrow a \rightarrow d \rightarrow c [Option ID = 2367]

Correct Answer :-

- c \rightarrow d \rightarrow b \rightarrow a [Option ID = 2366]

3) Motif is represented by:-

[Question ID = 594]

1. Commas repeated on the lattice [Option ID = 2372]
2. 3D translational periodic arrangement of points [Option ID = 2373]
3. Geometric shapes of lattice [Option ID = 2374]
4. Centre of symmetry in lattice [Option ID = 2375]

Correct Answer :-

- Commas repeated on the lattice [Option ID = 2372]

4) Statement 1: Vortex formation can be minimized by push pull mechanism.

Statement 2: Vortex formation reduces the mixing intensity by increasing the velocity of impeller.

[Question ID = 595]

1. True, False [Option ID = 2376]
2. True, True [Option ID = 2377]
3. False, False [Option ID = 2378]
4. False, True [Option ID = 2379]

Correct Answer :-

- True, False [Option ID = 2376]

5) Which of the following fluid can be considered as an ideal fluid?

[Question ID = 596]

1. Viscous fluid [Option ID = 2380]
2. Non-viscous fluid [Option ID = 2381]
3. Compressible fluid [Option ID = 2382]
4. All of these [Option ID = 2383]

Correct Answer :-

- Non-viscous fluid [Option ID = 2381]

6) Which of the following agencies is not classified as an 'executive agency' for administration of the act under the provision of Drugs and Cosmetics Act 1940?

[Question ID = 597]

1. Licensing authority [Option ID = 2384]
2. Drug inspectors [Option ID = 2385]
3. Drugs Consultative Committee [Option ID = 2386]
4. Customs collectors [Option ID = 2387]

Correct Answer :-

- Drugs Consultative Committee [Option ID = 2386]

7) As per Factories Act 1948, in CHAPTER VI dealing with working hours of adults, no adult worker shall be required or allowed to work in a factory for more than _____ hours in a week.

[Question ID = 598]

1. 30 [Option ID = 2388]
2. 40 [Option ID = 2389]
3. 48 [Option ID = 2390]
4. 56 [Option ID = 2391]

Correct Answer :-

- 48 [Option ID = 2390]

8) Henri Fayol's principle "*Espirit de corps*" means:-

[Question ID = 599]

1. Corporate objective [Option ID = 2392]
2. Group objective [Option ID = 2393]
3. Team activity [Option ID = 2394]

4. Team spirit [Option ID = 2395]

Correct Answer :-

- Team spirit [Option ID = 2395]

9) How customer's bias about the product will influence the marketing communication?

[Question ID = 600]

1. Positive effect [Option ID = 2396]
2. Negative effect [Option ID = 2397]
3. No effect [Option ID = 2398]
4. Both positive and Negative [Option ID = 2399]

Correct Answer :-

- Both positive and Negative [Option ID = 2399]

10) Which of the following is not patentable in India as per The Patents Act 1970?

[Question ID = 601]

1. New product [Option ID = 2400]
2. New process [Option ID = 2401]
3. New use of existing drug [Option ID = 2402]
4. New process for existing drug [Option ID = 2403]

Correct Answer :-

- New use of existing drug [Option ID = 2402]

11) Match the following enzymes in Column I with their respective functions under Column II

Column I

i. DNA ligase

ii. Alkaline phosphatase

iii. Reverse transcriptase

iv. Polynucleotide kinase

Column II

a) Synthesize a DNA copy of RNA

b) Forms a bond between 3' -OH and 5'-PO₄

c) Removes terminal PO₄ from 3' or 5' end of DNA

d) Adds phosphate to 5' -OH end

[Question ID = 1108]

1. i-c, ii-d, iii-a, iv-b [Option ID = 4428]
2. i-a, ii-b, iii-c, iv-d [Option ID = 4429]
3. i-b, ii-c, iii-a, iv-d [Option ID = 4430]
4. i-d, ii-a, iii-b, iv-c [Option ID = 4431]

Correct Answer :-

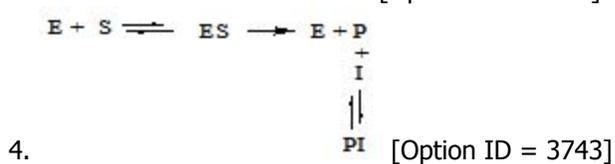
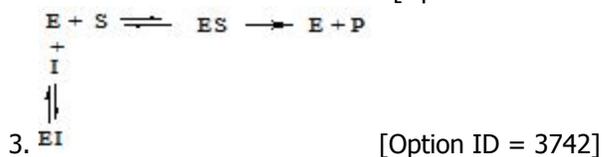
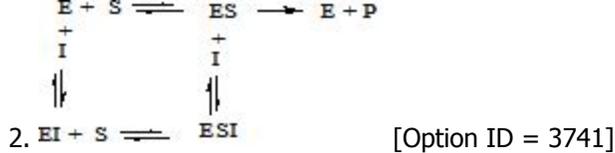
- i-b, ii-c, iii-a, iv-d [Option ID = 4430]

Topic:- Pharm. Chem. Set01

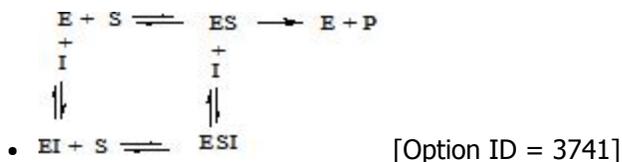
1) Which of the following replacement of amino acid in a protein may produce greatest change in its conformation?

[Question ID = 932]

1. Ser → Thr [Option ID = 3724]



Correct Answer :-



6) Which method is used for the Limit test for arsenic?

[Question ID = 937]

1. Gutzeit method [Option ID = 3744]
2. Oswald method [Option ID = 3745]
3. Arrhenius method [Option ID = 3746]
4. Karl-Fischer method [Option ID = 3747]

Correct Answer :-

- Gutzeit method [Option ID = 3744]

7) The agent used to prevent the dental carries is:-

[Question ID = 938]

1. Sodium fluoride [Option ID = 3748]
2. Strontium chloride [Option ID = 3749]
3. Zinc chloride [Option ID = 3750]
4. Dicalcium phosphate [Option ID = 3751]

Correct Answer :-

- Sodium fluoride [Option ID = 3748]

8) Which of the following definitions of an asymmetric reaction is the most accurate?

[Question ID = 939]

1. A reaction that creates a new chiral centre in the product [Option ID = 3752]
2. A reaction that involves a chiral reagent [Option ID = 3753]
3. A reaction which creates a new chiral centre with selectivity for one enantiomer/diastereoisomer over another [Option ID = 3754]
4. A reaction that is carried out on an asymmetric starting material [Option ID = 3755]

Correct Answer :-

- A reaction which creates a new chiral centre with selectivity for one enantiomer/diastereoisomer over another [Option ID = 3754]

9) What software programme is used to determine the Verloop steric parameter in QSAR?

[Question ID = 940]

1. Alchemy [Option ID = 3756]
2. Chem3D [Option ID = 3757]
3. Sterimol [Option ID = 3758]
4. Chem-Draw [Option ID = 3759]

Correct Answer :-

- Sterimol [Option ID = 3758]

10) The oral oligosaccharide hypoglycemic agent, which is administered at the start of the meal is:-

[Question ID = 941]

1. Pioglitazone [Option ID = 3760]
2. Miglitol [Option ID = 3761]
3. Acarbose [Option ID = 3762]
4. Glimepride [Option ID = 3763]

Correct Answer :-

- Acarbose [Option ID = 3762]

11) Which functional group is crucial for anti-malarial activity of artemisinin?

[Question ID = 942]

1. Aldehydic functional group [Option ID = 3764]
2. Ethylene bridge [Option ID = 3765]
3. Ketonic functional group [Option ID = 3766]
4. Peroxide bridge [Option ID = 3767]

Correct Answer :-

- Peroxide bridge [Option ID = 3767]

12) Select the drug which exhibits dual alpha and beta adrenergic receptor agonists activity.

[Question ID = 944]

1. Terbutaline [Option ID = 3772]
2. Clonidine [Option ID = 3773]
3. Metaproterenol [Option ID = 3774]
4. Dobutamine [Option ID = 3775]

Correct Answer :-

- Dobutamine [Option ID = 3775]

13) Appropriate hybridization schemes for the C atoms in molecule $\text{CH}_3\text{CO}_2\text{H}$ are:-

[Question ID = 945]

1. sp^3 and sp [Option ID = 3776]
2. sp^3 and sp^2 [Option ID = 3777]
3. sp^2 and sp [Option ID = 3778]
4. sp^3 and sp^3 [Option ID = 3779]

Correct Answer :-

- sp^3 and sp^2 [Option ID = 3777]

14) In Universal indicators, a pH of 7 is shown with:-

[Question ID = 946]

1. Yellow color [Option ID = 3780]
2. Green color [Option ID = 3781]
3. Blue color [Option ID = 3782]
4. Pink color [Option ID = 3783]

Correct Answer :-

- Green color [Option ID = 3781]

15) Which statement regarding Hückel's rule is FALSE?

[Question ID = 947]

1. There must be $(4n + 2)$ pi (n) electrons [Option ID = 3784]
2. The molecule must be planar [Option ID = 3785]
3. The molecule must be cyclic [Option ID = 3786]
4. Each of the pi (n) electrons must be associated with a conjugated double bond [Option ID = 3787]

Correct Answer :-

- Each of the pi (n) electrons must be associated with a conjugated double bond [Option ID = 3787]

16) Anthracene is isomeric with:-

[Question ID = 948]

1. Phenanthrene [Option ID = 3788]
2. Naphthalene [Option ID = 3789]
3. Benzene [Option ID = 3790]
4. Azulene [Option ID = 3791]

Correct Answer :-

- Phenanthrene [Option ID = 3788]

17) The molecular formula of phenanthrene is:-

[Question ID = 949]

1. $C_{14}H_{10}$ [Option ID = 3792]
2. $C_{12}H_{10}$ [Option ID = 3793]
3. $C_{14}H_{14}$ [Option ID = 3794]
4. $C_{14}H_8$ [Option ID = 3795]

Correct Answer :-

- C₁₄ H₁₀ [Option ID = 3792]

18) In electrophilic substitution of pyridine, reaction of pyridine with H₂O₂ in acetic acid leads to formation of:-

[Question ID = 950]

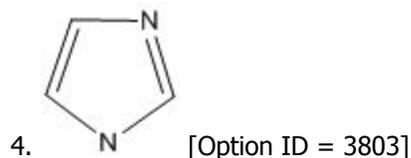
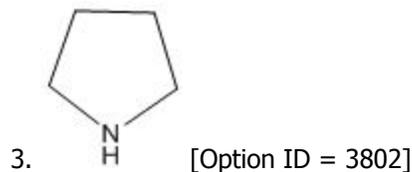
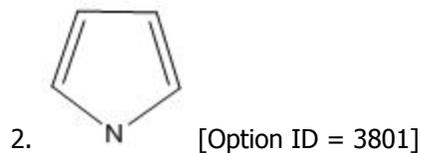
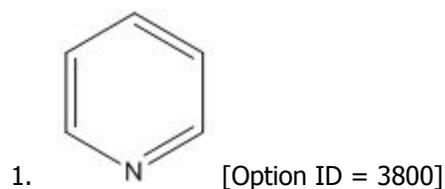
1. 1,4-Dihydropyridine [Option ID = 3796]
2. 2-Hydroxypyridine [Option ID = 3797]
3. 2-Pyridone [Option ID = 3798]
4. Pyridine-N-oxide [Option ID = 3799]

Correct Answer :-

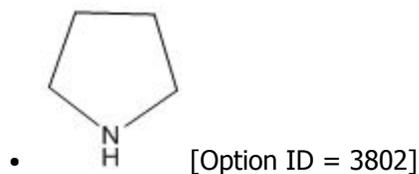
- Pyridine-N-oxide [Option ID = 3799]

19) Which compound is most basic?

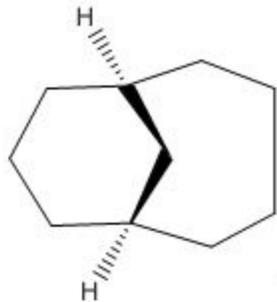
[Question ID = 951]



Correct Answer :-



20) Correct Nomenclature for the following bridged bicyclic ring system is:-



[Question ID = 952]

1. bicyclo[4.4.0]decane [Option ID = 3804]
2. bicyclo[4.3.0]decane [Option ID = 3805]
3. bicyclo[4.3.1]decane [Option ID = 3806]
4. bicyclo[4.4.1]decane [Option ID = 3807]

Correct Answer :-

- bicyclo[4.3.1]decane [Option ID = 3806]

21) Which among the following correctly defines Diastereomer?

[Question ID = 953]

1. These have same magnitude but different signs of optical rotation [Option ID = 3808]
2. Nonsuperimposable object mirror relationship [Option ID = 3809]
3. These differ in all physical properties [Option ID = 3810]
4. Separation is very difficult [Option ID = 3811]

Correct Answer :-

- These differ in all physical properties [Option ID = 3810]

22) Galactose and Glucose are:-

[Question ID = 954]

1. Epimers [Option ID = 3812]
2. Anomers [Option ID = 3813]
3. Isomers [Option ID = 3814]
4. Ketose - Aldose isomers [Option ID = 3815]

Correct Answer :-

- Epimers [Option ID = 3812]

23) Which among the following is a non-essential amino acid?

[Question ID = 955]

1. Lysine [Option ID = 3816]
2. Threonine [Option ID = 3817]
3. Serine [Option ID = 3818]
4. Histidine [Option ID = 3819]

Correct Answer :-

- Serine [Option ID = 3818]

24) Which of the following is a 3,3-sigmatropic reaction which converts a 1,5-diene to an isomeric 1,5-diene?

[Question ID = 956]

1. Cope rearrangement [Option ID = 3820]
2. Claisen rearrangement [Option ID = 3821]
3. Photochemical [2+2] reaction [Option ID = 3822]
4. Diels-Alder reaction [Option ID = 3823]

Correct Answer :-

- Cope rearrangement [Option ID = 3820]

25) What quantity of an indicator solution shall be added when quantity is not mentioned in an assay or test?

[Question ID = 957]

1. 0.1 ml [Option ID = 3824]
2. 0.05 ml [Option ID = 3825]
3. 0.2 ml [Option ID = 3826]
4. 0.5 ml [Option ID = 3827]

Correct Answer :-

- 0.1 ml [Option ID = 3824]

26) In Kjeldahl method, sample containing nitrogen is digested with _____.

[Question ID = 958]

1. Concentrated sodium hydroxide [Option ID = 3828]
2. Fuming nitric acid [Option ID = 3829]
3. Concentrated sulphuric acid [Option ID = 3830]
4. Strong ammonia solution [Option ID = 3831]

Correct Answer :-

- Concentrated sulphuric acid [Option ID = 3830]

27) What is the concentration of paracetamol in a 0.1 N sodium hydroxide solution, whose absorption in a 1 cm cell at its λ_{max} , 257 nm, was found to be 0.825? The A (1%, 1 cm) in the IP monograph of paracetamol is given as 715 at 257 nm

[Question ID = 959]

1. 1.1 g/100 ml [Option ID = 3832]
2. 0.0011 mg/100 ml [Option ID = 3833]
3. 0.0011 g/100 ml [Option ID = 3834]
4. 0.0011 μ g/100 ml [Option ID = 3835]

Correct Answer :-

- 0.0011 g/100 ml [Option ID = 3834]

28) The unit for specific absorbance A (1%, 1cm) is:-

[Question ID = 960]

1. μ g/mL [Option ID = 3836]
2. mg/L [Option ID = 3837]

3. liter mole⁻¹ cm⁻¹ [Option ID = 3838]
4. dl g⁻¹ cm⁻¹ [Option ID = 3839]

Correct Answer :-

- dl g⁻¹ cm⁻¹ [Option ID = 3839]

29) What is the nuclear magnetic resonance frequency of 1H in a 7.05 Tesla magnetic field strength?

[Question ID = 961]

1. 300.0 MHz [Option ID = 3840]
2. 200.0 MHz [Option ID = 3841]
3. 60.0 MHz [Option ID = 3842]
4. 100 MHz [Option ID = 3843]

Correct Answer :-

- 300.0 MHz [Option ID = 3840]

30) What is Hydrogen Deficiency Index (HDI) value for toluene?

[Question ID = 962]

1. 1 [Option ID = 3844]
2. 2 [Option ID = 3845]
3. 3 [Option ID = 3846]
4. 4 [Option ID = 3847]

Correct Answer :-

- 4 [Option ID = 3847]

31) In NMR, the aromatic proton resonate in a characteristic narrow range at:-

[Question ID = 963]

1. δ 6.5 – δ 8.0 [Option ID = 3848]
2. δ 11.0 – δ 12.0 [Option ID = 3849]
3. δ 2.0 – δ 4.0 [Option ID = 3850]
4. δ 0.7 – δ 1.3 [Option ID = 3851]

Correct Answer :-

- δ 6.5 – δ 8.0 [Option ID = 3848]

32) The difficulties of long elution time and poor resolution of complex mixtures are observed in elution analysis. These difficulties can be overcome by modification of elution analysis, known as:-

[Question ID = 964]

1. Isocratic-elution analysis [Option ID = 3852]
2. Gradient-elution analysis [Option ID = 3853]
3. Displacement analysis [Option ID = 3854]
4. Frontal analysis [Option ID = 3855]

Correct Answer :-

- Gradient-elution analysis [Option ID = 3853]

33) Materials whose consistency depends on the duration of shear, as well as on the rate of shear, exhibit:-

[Question ID = 965]

1. Rheopexy [Option ID = 3856]
2. Thixotropy [Option ID = 3857]
3. Viscoelasticity [Option ID = 3858]
4. Plasticity [Option ID = 3859]

Correct Answer :-

- Thixotropy [Option ID = 3857]

34) Which of the following solutions are more likely to have the same osmotic pressure? Solutions of: -

[Question ID = 966]

1. Diluted nonelectrolytes with the same molal concentration [Option ID = 3860]
2. Concentrated nonelectrolytes with the same molal concentration [Option ID = 3861]
3. Diluted electrolytes with the same molal concentration [Option ID = 3862]
4. Concentrated electrolytes with the same molal concentration [Option ID = 3863]

Correct Answer :-

- Diluted nonelectrolytes with the same molal concentration [Option ID = 3860]

35) Which statements are correct for the micelle formation?

P. Micelles are dynamic structures that are continually formed and broken down in solution.

Q. The typical micelle diameter is about 2–3 μm and so they are visible under the light microscope.

R. Micelle formation is a spontaneous process.

S. When the surfactant concentration is increased above the CMC, the number of micelles increases and the free surfactant concentration decreases below CMC.

[Question ID = 967]

1. P and Q [Option ID = 3864]
2. P and R [Option ID = 3865]
3. P and S [Option ID = 3866]
4. R and S [Option ID = 3867]

Correct Answer :-

- P and R [Option ID = 3865]

36) Which equation is used to predict the stability of a drug product at room temperature from experiments at accelerated temperature?

[Question ID = 968]

1. Higuchi equation [Option ID = 3868]
2. The Arrhenius' equation [Option ID = 3869]
3. Hildebrand equation [Option ID = 3870]
4. The Hixson-Crowell equation [Option ID = 3871]

Correct Answer :-

- The Arrhenius' equation [Option ID = 3869]

37) Which statement correctly describes Hess's Law?

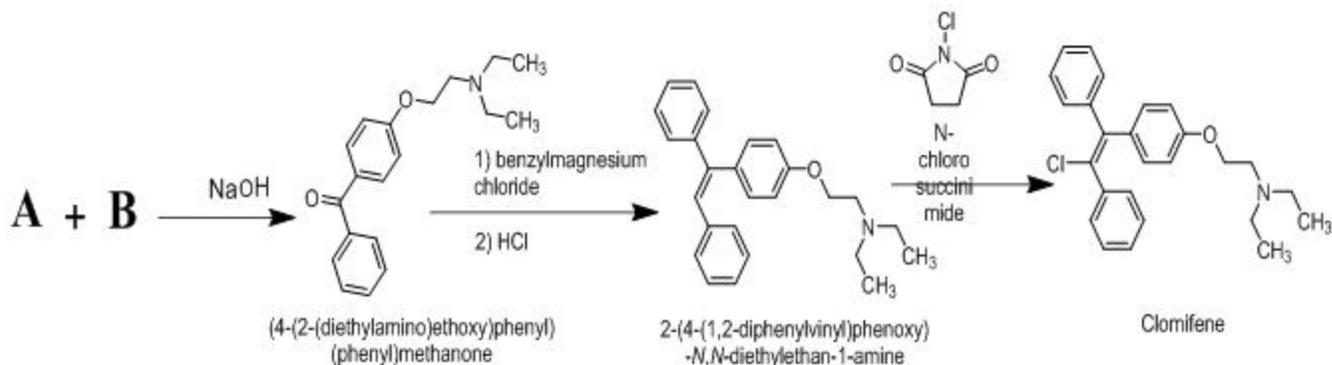
[Question ID = 969]

1. The enthalpy of all reactants in their standard states is defined as zero [Option ID = 3872]
2. Enthalpy changes can be calculated only if one or more of the reactants is/are element [Option ID = 3873]
3. The enthalpy change of a reaction can be calculated only at 1 atm pressure and 25 °C [Option ID = 3874]
4. The enthalpy change of a reaction is independent of the route of reaction [Option ID = 3875]

Correct Answer :-

- The enthalpy change of a reaction is independent of the route of reaction [Option ID = 3875]

38) Identify the starting material A and B in the synthesis of Clomifene.



[Question ID = 1112]

1. Where A = 4-hydroxy-benzophenone and B = 2-diethylamino-ethyl chloride [Option ID = 4444]
2. Where A = 4-hydroxy benzaldehyde and B = 4-methoxy aniline [Option ID = 4445]
3. Where A = 4-hydroxy-benzophenone and B = 4-methoxy aniline [Option ID = 4446]
4. Where A = 4-hydroxy-benzophenone and B = benzaldehyde [Option ID = 4447]

Correct Answer :-

- Where A = 4-hydroxy-benzophenone and B = 2-diethylamino-ethyl chloride [Option ID = 4444]

Topic:- Pharmaceutics Set01

1) The role of glutathione in tissues includes all except:-

[Question ID = 603]

1. Participate in decomposition of hydrogen peroxide [Option ID = 2408]
2. Participate in activation of methionine [Option ID = 2409]
3. Participate in detoxification reactions [Option ID = 2410]
4. Biologically active in oxidized form [Option ID = 2411]

Correct Answer :-

- Biologically active in oxidized form [Option ID = 2411]

2) When Ke is constant and Ka is larger:-

[Question ID = 604]

1. C_{max} is more and t_{max} is longer [Option ID = 2412]
2. C_{max} is lesser and t_{max} is longer [Option ID = 2413]

- C_{\max} is lesser and t_{\max} is short [Option ID = 2414]
- C_{\max} is more and t_{\max} is short [Option ID = 2415]

Correct Answer :-

- C_{\max} is more and t_{\max} is short [Option ID = 2415]

3) When considering drug delivery to the brain which of the following is false?

[Question ID = 605]

- The cells in the blood vessels that supply the brain are tightly connected which restricts drug absorption [Option ID = 2416]
- Only relatively small lipophilic molecules readily, passively diffuse in to the brain [Option ID = 2417]
- Drugs with a low log P value show improved passive diffusion into the brain (P: oil / water partition coefficient) [Option ID = 2418]
- Polar molecules can be taken up into the brain through active transport [Option ID = 2419]

Correct Answer :-

- Drugs with a low log P value show improved passive diffusion into the brain (P: oil / water partition coefficient) [Option ID = 2418]

4) IVIVC utilizes the principles of statistical moment analysis:-

[Question ID = 606]

- Level A [Option ID = 2420]
- Level B [Option ID = 2421]
- Level C [Option ID = 2422]
- Level D [Option ID = 2423]

Correct Answer :-

- Level B [Option ID = 2421]

5) The systems that follows, Weibull Mathematical Model used to describe drug release kinetics are:-

[Question ID = 607]

- Swellable polymeric devices [Option ID = 2424]
- Diffusion matrix formulation [Option ID = 2425]
- Erodible matrix formulation [Option ID = 2426]
- Transdermal system [Option ID = 2427]

Correct Answer :-

- Erodible matrix formulation [Option ID = 2426]

6) Which method is used by pharmacists for complete blending of potent powders with large quantities of diluents?

[Question ID = 609]

- Spatulation [Option ID = 2432]
- Levigation [Option ID = 2433]
- Trituration [Option ID = 2434]
- Geometric dilution [Option ID = 2435]

Correct Answer :-

- Geometric dilution [Option ID = 2435]

7) Substance used to reduce friction during tablet compression and facilitate ejection of tablets from the die cavity is called as:-

[Question ID = 610]

1. Lubricant [Option ID = 2436]
2. Glidant [Option ID = 2437]
3. Anti-adherent [Option ID = 2438]
4. Humectant [Option ID = 2439]

Correct Answer :-

- Lubricant [Option ID = 2436]

8) What quantities of 95% v/v and 45% v/v alcohols are to be mixed to make 800 mL of 65% v/v alcohol?

[Question ID = 611]

1. 480 mL of 95% and 320 mL of 45% alcohol [Option ID = 2440]
2. 320 mL of 95% and 480 mL of 45% alcohol [Option ID = 2441]
3. 440 mL of 95% and 360 mL of 45% alcohol [Option ID = 2442]
4. 360 mL of 95% and 440 mL of 45% alcohol [Option ID = 2443]

Correct Answer :-

- 320 mL of 95% and 480 mL of 45% alcohol [Option ID = 2441]

9) The proportion of NaCl liquid to give 1.5% solution of drug isotonic with blood plasma is:- (The freezing point of 1% w/v solution of drug is -0.122 and NaCl is -0.576 °C)

[Question ID = 612]

1. 0.79% [Option ID = 2444]
2. 0.585% [Option ID = 2445]
3. 0.9% [Option ID = 2446]
4. 0.5% [Option ID = 2447]

Correct Answer :-

- 0.585% [Option ID = 2445]

10) Which of the following statement is NOT TRUE about prokaryotes?

[Question ID = 613]

1. Nucleus is not bounded by nuclear membrane [Option ID = 2448]
2. Cell wall contains peptidoglycan [Option ID = 2449]
3. 80S ribosomes are distributed in cytoplasm [Option ID = 2450]
4. It is Haploid in nature [Option ID = 2451]

Correct Answer :-

- 80S ribosomes are distributed in cytoplasm [Option ID = 2450]

11) Match the following diseases under column I with the respective causative organisms under Column II.

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Column I	Column II
i. Creutzfeldt-Jacob disease	a. <i>Yersinia pestis</i>
ii. Typhus	b. Prions
iii. Syphilis	c. <i>Rickettsia prowazekii</i>
iv. Plague	d. <i>Treponema palladium</i>

[Question ID = 616]

1. i-c, ii-d, iii-a, iv-b [Option ID = 2460]
2. i-a, ii-b, iii-c, iv-d [Option ID = 2461]
3. i-b, ii-c, iii-d, iv-a [Option ID = 2462]
4. i-d, ii-a, iii-b, iv-c [Option ID = 2463]

Correct Answer :-

- i-b, ii-c, iii-d, iv-a [Option ID = 2462]

12) As the dielectric constant values increases, the polarity of the solvents _____.

[Question ID = 617]

1. Decreases [Option ID = 2464]
2. Increases [Option ID = 2465]
3. Remains constant [Option ID = 2466]
4. Decreases and then remains constant [Option ID = 2467]

Correct Answer :-

- Increases [Option ID = 2465]

13) The angle of repose is calculated by _____.

[Question ID = 618]

1. $\tan \alpha = \text{Radius/Height}$ [Option ID = 2468]
2. $\tan \alpha = 1 + \text{Radius/Height}$ [Option ID = 2469]
3. $\tan \alpha = 1 - \text{Radius/Height}$ [Option ID = 2470]
4. $\tan \alpha = \text{Height/Radius}$ [Option ID = 2471]

Correct Answer :-

- $\tan \alpha = \text{Height/Radius}$ [Option ID = 2471]

14) Spray drying / spray congealing method is generally used to prepare _____.

[Question ID = 619]

1. Tablets [Option ID = 2472]
2. Microcapsules [Option ID = 2473]
3. Capsules [Option ID = 2474]
4. Ointments [Option ID = 2475]

Correct Answer :-

- Microcapsules [Option ID = 2473]

15) HLB value of tragacanth is:-

[Question ID = 620]

1. 4.7 [Option ID = 2476]
2. 8.7 [Option ID = 2477]
3. 13.2 [Option ID = 2478]
4. 14.3 [Option ID = 2479]

Correct Answer :-

- 13.2 [Option ID = 2478]

16) Vials and bottles are regularly not subjected to following test:-

[Question ID = 621]

1. Sterility test [Option ID = 2480]
2. Clarity test [Option ID = 2481]
3. Leaker (chamber) test [Option ID = 2482]
4. Pyrogen test [Option ID = 2483]

Correct Answer :-

- Leaker (chamber) test [Option ID = 2482]

17) As per USP, test limit for treated soda lime glass with container size of 200 ml is:-

[Question ID = 622]

1. 0.70ml of 0.02N Acid [Option ID = 2484]
2. 1.0ml of 0.2N Acid [Option ID = 2485]
3. 0.20ml of 0.02N Acid [Option ID = 2486]
4. 0.70ml of 0.2N Acid [Option ID = 2487]

Correct Answer :-

- 0.20ml of 0.02N Acid [Option ID = 2486]

18) In plasma, phenobarbital is present as ionized and unionized forms in equal amount because:-

[Question ID = 624]

1. It is weakly acidic drug [Option ID = 2492]
2. It is weakly basic drug [Option ID = 2493]
3. pH of plasma is 6.8 [Option ID = 2494]
4. pKa of the phenobarbital is 7.4 [Option ID = 2495]

Correct Answer :-

- pKa of the phenobarbital is 7.4 [Option ID = 2495]

19) A material which is insoluble and inert and used in matrix tablet formulation is:-

[Question ID = 625]

1. Polyethylene [Option ID = 2496]
2. Stearyl alcohol [Option ID = 2497]

- Polyethylene glycol [Option ID = 2498]
- Triglycerides [Option ID = 2499]

Correct Answer :-

- Polyethylene [Option ID = 2496]

20) Which test is done for USP Type-I glass containers for injections?

[Question ID = 626]

- Water attack test [Option ID = 2500]
- Powdered glass test [Option ID = 2501]
- Powdered glass followed by water attack test [Option ID = 2502]
- Water attack followed powdered glass test [Option ID = 2503]

Correct Answer :-

- Powdered glass test [Option ID = 2501]

21) Isoelectric point of Type A gelatin is _____.

[Question ID = 627]

- pH 7.0 [Option ID = 2504]
- pH 4.7 [Option ID = 2505]
- pH 9.0 [Option ID = 2506]
- pH 7.4 [Option ID = 2507]

Correct Answer :-

- pH 9.0 [Option ID = 2506]

22) What is the effective ratio of methyl paraben and propyl paraben for anti-microbial activity?

[Question ID = 628]

- 1:1 [Option ID = 2508]
- 5:1 [Option ID = 2509]
- 2.5:1 [Option ID = 2510]
- 10:1 [Option ID = 2511]

Correct Answer :-

- 10:1 [Option ID = 2511]

23) Which of the following formula is used to determine shelf life as per first order reaction?

[Question ID = 629]

- $t_{90} = 0.693/k$ [Option ID = 2512]
- $t_{90} = 0.104/k$ [Option ID = 2513]
- $t_{1/2} = 0.693/k$ [Option ID = 2514]
- $t_{1/2} = 0.105/k$ [Option ID = 2515]

Correct Answer :-

- $t_{90} = 0.104/k$ [Option ID = 2513]

24) Following are endogenous carriers use for targeted drug delivery except:-

[Question ID = 630]

1. Lipoprotein [Option ID = 2516]
2. Serum Albumin [Option ID = 2517]
3. Erythrocyte [Option ID = 2518]
4. Microparticulates [Option ID = 2519]

Correct Answer :-

- Microparticulates [Option ID = 2519]

25) The friability issue of the tablet can be solved by different ways except:-

[Question ID = 631]

1. Increasing the upper punch pressure of tablet machine [Option ID = 2520]
2. Addition of more tablet binder to granules [Option ID = 2521]
3. Increasing the moisture content of granules [Option ID = 2522]
4. Adjusting the lower punch pressure of tablet machine [Option ID = 2523]

Correct Answer :-

- Adjusting the lower punch pressure of tablet machine [Option ID = 2523]

26) What are the specific surface per unit volume S_v of spherical particles with density of 3 gm/cm^3 and volume surface diameter, d_{vs} of $2.57 \mu\text{m}$?

[Question ID = 633]

1. $7.78 \times 10^3 \text{ cm}^2/\text{cm}^3$ [Option ID = 2528]
2. $2.33 \times 10^3 \text{ cm}^2/\text{cm}^3$ [Option ID = 2529]
3. $1.55 \times 10^3 \text{ cm}^2/\text{cm}^3$ [Option ID = 2530]
4. $1.00 \times 10^3 \text{ cm}^2/\text{cm}^3$ [Option ID = 2531]

Correct Answer :-

- $2.33 \times 10^3 \text{ cm}^2/\text{cm}^3$ [Option ID = 2529]

27) In a free-flowing powder, the bulk density and tapped density would be close in value, therefore, the Carr index would be:-

[Question ID = 634]

1. Small [Option ID = 2532]
2. Medium [Option ID = 2533]
3. Large [Option ID = 2534]
4. None [Option ID = 2535]

Correct Answer :-

- Small [Option ID = 2532]

28) Buffer capacity is also referred to as:-

[Question ID = 635]

1. Buffer index [Option ID = 2536]

2. Buffer value [Option ID = 2537]
3. Buffer efficiency [Option ID = 2538]
4. All of these [Option ID = 2539]

Correct Answer :-

- All of these [Option ID = 2539]

29) Keesom interactions has a force of:-

[Question ID = 636]

1. 0.5- 1 kcal/mol [Option ID = 2540]
2. 1-7 kcal/mol [Option ID = 2541]
3. 1-3 kcal/mol [Option ID = 2542]
4. None of these [Option ID = 2543]

Correct Answer :-

- 1-7 kcal/mol [Option ID = 2541]

30) Dipole - induced dipoles are also known as:-

[Question ID = 637]

1. London forces [Option ID = 2544]
2. Keesom forces [Option ID = 2545]
3. Debye forces [Option ID = 2546]
4. Hydrogen bonding [Option ID = 2547]

Correct Answer :-

- Debye forces [Option ID = 2546]

31) The interfacial tension of Oleic acid against water at 20°C is:-

[Question ID = 638]

1. 15.6 [Option ID = 2548]
2. 52.3 [Option ID = 2549]
3. 428 [Option ID = 2550]
4. 8.51 [Option ID = 2551]

Correct Answer :-

- 15.6 [Option ID = 2548]

32) Suspensions of starch in water exhibit:-

[Question ID = 639]

1. Plastic flow [Option ID = 2552]
2. Pseudoplastic flow [Option ID = 2553]
3. Dilatant flow [Option ID = 2554]
4. None of these [Option ID = 2555]

Correct Answer :-

- Dilatant flow [Option ID = 2554]

33) Very weak bases having pKa < 5:-

[Question ID = 766]

1. Are ionized in the entire pH range of GIT [Option ID = 3060]
2. Absorbed only in stomach [Option ID = 3061]
3. Are unionized at all pH values [Option ID = 3062]
4. None of these [Option ID = 3063]

Correct Answer :-

- Are unionized at all pH values [Option ID = 3062]

34) During determination of absorption rate constant by method of residual, flip-flop phenomenon occurs when (Ka absorption rate constant and K_E overall elimination rate constant).

[Question ID = 1114]

1. $K_E/K_a \geq 3$ [Option ID = 4452]
2. $K_a/K_E \geq 3$ [Option ID = 4453]
3. $K_E/K_a \leq 3$ [Option ID = 4454]
4. $K_a/K_E \leq 3$ [Option ID = 4455]

Correct Answer :-

- $K_E/K_a \geq 3$ [Option ID = 4452]

35) Which of the following disinfectant effectively destroys vegetative bacterial cells including Gram positive and Gram negative bacteria, bacterial endospores, fungi, and viruses?

[Question ID = 1115]

1. 8% formaldehyde + 70% alcohol [Option ID = 4456]
2. 70% Alcohol [Option ID = 4457]
3. 0.1% Phenol aqueous [Option ID = 4458]
4. 0.1% Iodine aqueous [Option ID = 4459]

Correct Answer :-

- 8% formaldehyde + 70% alcohol [Option ID = 4456]

36) Which of the following are obligatory intracellular parasites?

- a) Virus
- b) Fungus
- c) Mycobacterium
- d) Rickettsia

[Question ID = 1116]

1. all [Option ID = 4460]
2. (a), (b) and (c) [Option ID = 4461]
3. (c) and (d) [Option ID = 4462]
4. (a) and (d) [Option ID = 4463]

Correct Answer :-

- (a) and (d) [Option ID = 4463]

37) Select the correct statement.

[Question ID = 1117]

1. Acids salt corresponding to an insoluble salt will be more water soluble than original salt [Option ID = 4464]
2. Hydroxides and oxides of compounds other than alkali metal cations and the common ions are generally water soluble [Option ID = 4465]
3. Sulphides are water soluble except for their alkali metal salts [Option ID = 4466]
4. Ammonium and Quaternary ammonium salts are water insoluble [Option ID = 4467]

Correct Answer :-

- Acids salt corresponding to an insoluble salt will be more water soluble than original salt [Option ID = 4464]

38) What is the viscosity of resulting liquid after mixing 300mL of liquid A ($\eta=1.0$ cP) with the 200mL of liquid B ($\eta=3.4$ cP)?

[Question ID = 1175]

1. 2.2 cP [Option ID = 4696]
2. 1.4 cP [Option ID = 4697]
3. 1.6 cP [Option ID = 4698]
4. 1.8 cP [Option ID = 4699]

Correct Answer :-

- 1.4 cP [Option ID = 4697]

Topic:- Pharmacognosy Set01

1) A compound now increasingly used as standard practice for enhancing the flow of rubber latex by spraying on to the scraped bark of the rubber tree increasing the latex yields from 36% to 130% is:-

[Question ID = 666]

1. Brassinosteroids [Option ID = 2660]
2. Abscisic acid [Option ID = 2661]
3. Ethephon [Option ID = 2662]
4. Kinetin [Option ID = 2663]

Correct Answer :-

- Ethephon [Option ID = 2662]

2) The constituent of Cochineal is:-

[Question ID = 667]

1. Cantharidin [Option ID = 2664]
2. Hirudin [Option ID = 2665]
3. Tannic acid [Option ID = 2666]
4. Carminic acid [Option ID = 2667]

Correct Answer :-

- Carminic acid [Option ID = 2667]

3) The sweet taste and odour of fennel is due to:-

[Question ID = 668]

1. Anethole [Option ID = 2668]
2. Fenchone [Option ID = 2669]
3. Eugenol [Option ID = 2670]
4. Phellandrene [Option ID = 2671]

Correct Answer :-

- Anethole [Option ID = 2668]

4) Catechu is used in medicine as an:-

[Question ID = 669]

1. Antidiabetic [Option ID = 2672]
2. Anti cancer [Option ID = 2673]
3. Antipyretic [Option ID = 2674]
4. Astringent [Option ID = 2675]

Correct Answer :-

- Astringent [Option ID = 2675]

5) Tropane alkaloids are biosynthesized from _____ amino acid.

[Question ID = 671]

1. Phenylalanine [Option ID = 2680]
2. Tyrosine [Option ID = 2681]
3. Ornithine [Option ID = 2682]
4. Leucine [Option ID = 2683]

Correct Answer :-

- Ornithine [Option ID = 2682]

6) One mg of Lycopodium contains an average of:-

[Question ID = 673]

1. 97000 spores [Option ID = 2688]
2. 96000 spores [Option ID = 2689]
3. 95000 spores [Option ID = 2690]
4. 94000 spores [Option ID = 2691]

Correct Answer :-

- 94000 spores [Option ID = 2691]

7) Charaka, a physician belonged to which system of medicine?

[Question ID = 674]

1. Ayurveda [Option ID = 2692]
2. Unani [Option ID = 2693]
3. Siddha [Option ID = 2694]
4. Homeopathy [Option ID = 2695]

Correct Answer :-

- Ayurveda [Option ID = 2692]

8) The CCCN code indicating the botanical drugs is:-

[Question ID = 1090]

1. 2211 [Option ID = 4356]
2. 1122 [Option ID = 4357]
3. 1211 [Option ID = 4358]
4. 1311 [Option ID = 4359]

Correct Answer :-

- 1211 [Option ID = 4358]

9) *Uncaria gambir* belongs to the family:-

[Question ID = 1110]

1. Rubiaceae [Option ID = 4436]
2. Combretaceae [Option ID = 4437]
3. Punicaceae [Option ID = 4438]
4. Rosaceae [Option ID = 4439]

Correct Answer :-

- Rubiaceae [Option ID = 4436]

10) *Alkanna tinctoria* (Boraginaceae) roots are used in:-

[Question ID = 1111]

1. Dandruff [Option ID = 4440]
2. Tooth paste [Option ID = 4441]
3. Facial cleansing wash [Option ID = 4442]
4. Lipstick formulations and hair dyes [Option ID = 4443]

Correct Answer :-

- Lipstick formulations and hair dyes [Option ID = 4443]

Topic:- Pharmacology Set01

1) Identify the clotting factor which is known as Stuart factor or thrombokinase.

[Question ID = 830]

1. Clotting factor - IV [Option ID = 3316]
2. Clotting factor - VIII [Option ID = 3317]
3. Clotting factor - X [Option ID = 3318]
4. Clotting factor - XII [Option ID = 3319]

Correct Answer :-

- Clotting factor - X [Option ID = 3318]

2) Which part of the eye is light sensitive (photosensitive)?

[Question ID = 831]

1. Iris [Option ID = 3320]
2. Sclera [Option ID = 3321]
3. Lens [Option ID = 3322]
4. Retina [Option ID = 3323]

Correct Answer :-

- Retina [Option ID = 3323]

3) Identify the specific site where maturation of sperm takes place.

[Question ID = 832]

1. Spermatic cord [Option ID = 3324]
2. Epididymis [Option ID = 3325]
3. Testis [Option ID = 3326]
4. Vas deference [Option ID = 3327]

Correct Answer :-

- Epididymis [Option ID = 3325]

4) Identify the hormone that stimulates sperm production in testes and ovulation in females.

[Question ID = 833]

1. Prolactin [Option ID = 3328]
2. Luteinising hormone [Option ID = 3329]
3. Follicle stimulating hormone [Option ID = 3330]
4. Adrenocorticotrophic hormone [Option ID = 3331]

Correct Answer :-

- Follicle stimulating hormone [Option ID = 3330]

5) Identify the correct pair from the following:-

[Question ID = 834]

1. Sympathetic stimulation: Bronchoconstriction [Option ID = 3332]
2. Parasympathetic stimulation: Secretion of gastric juice [Option ID = 3333]
3. Sympathetic stimulation: Contraction of pupil [Option ID = 3334]
4. Parasympathetic stimulation: Dilatation of pupil [Option ID = 3335]

Correct Answer :-

- Parasympathetic stimulation: Secretion of gastric juice [Option ID = 3333]

6) The number of subjects required in a phase 1 clinical trial is:-

[Question ID = 835]

1. 20 to 100 [Option ID = 3336]
2. Upto several hundred [Option ID = 3337]
3. 300 to 3,000 [Option ID = 3338]
4. Several thousands [Option ID = 3339]

Correct Answer :-

- 20 to 100 [Option ID = 3336]

7) To obtain a more effective bronchodilation, the drugs that are combined along with beta-adrenoceptor agonists are:-

[Question ID = 836]

1. Cholinergic antagonists [Option ID = 3340]
2. Cholinergic agonists [Option ID = 3341]
3. Beta-adrenoceptor antagonists [Option ID = 3342]
4. Alpha-adrenoceptor antagonists [Option ID = 3343]

Correct Answer :-

- Cholinergic antagonists [Option ID = 3340]

8) Which of the following antipsychotic drugs, at low doses, is combined with antidepressants in treatment-resistant depression?

[Question ID = 837]

1. Chlorpromazine [Option ID = 3344]
2. Haloperidol [Option ID = 3345]
3. Risperidone [Option ID = 3346]
4. Fluphenazine [Option ID = 3347]

Correct Answer :-

- Risperidone [Option ID = 3346]

9) The management of Type-B adverse drug reaction is:-

[Question ID = 838]

1. To reduce the dose [Option ID = 3348]
2. To withhold the dose and avoid in future [Option ID = 3349]
3. To increase the dose [Option ID = 3350]
4. To reintroduce and withdraw slowly [Option ID = 3351]

Correct Answer :-

- To withhold the dose and avoid in future [Option ID = 3349]

10) Abatacept, a fusion protein, and a co-stimulation blocker used in the treatment of Rheumatoid arthritis blocks the:-

[Question ID = 839]

1. Activation of T-cells [Option ID = 3352]
2. Inhibition of T-cells [Option ID = 3353]
3. Activation of B-cells [Option ID = 3354]
4. Inhibition of B-cells [Option ID = 3355]

Correct Answer :-

- Activation of T-cells [Option ID = 3352]

11) Hemophilia A is a disease characterized by deficiency of:-

[Question ID = 840]

1. Factor VIII [Option ID = 3356]
2. Factor II [Option ID = 3357]
3. Factor VII [Option ID = 3358]
4. Factor V [Option ID = 3359]

Correct Answer :-

- Factor VIII [Option ID = 3356]

12) The enzyme HMG-CoA reductase is involved in the pathogenesis of:-

[Question ID = 842]

1. Atherosclerosis [Option ID = 3364]
2. Renal failure [Option ID = 3365]
3. Alzheimer disease [Option ID = 3366]
4. Parkinson disease [Option ID = 3367]

Correct Answer :-

- Atherosclerosis [Option ID = 3364]

13) Rheumatic heart disease is caused by:-

[Question ID = 843]

1. Streptococcal infection [Option ID = 3368]
2. Excessive lipid consumption [Option ID = 3369]
3. Abnormal lipid metabolism [Option ID = 3370]
4. Atherosclerosis [Option ID = 3371]

Correct Answer :-

- Streptococcal infection [Option ID = 3368]

14) Which of the following is NOT a gene associated with breast cancer?

[Question ID = 844]

1. BRCA1 [Option ID = 3372]
2. HER2 [Option ID = 3373]
3. BRCA2 [Option ID = 3374]
4. CHRM1 [Option ID = 3375]

Correct Answer :-

- CHRM1 [Option ID = 3375]

15) Which of the following is NOT true about the Ebola Virus Disease (EVD)?

[Question ID = 845]

1. Spreads through human-to-human transmission via direct contact [Option ID = 3376]
2. Antiviral drugs are approved by FDA to mitigate the infection [Option ID = 3377]
3. Diagnostic tests include ELISA [Option ID = 3378]
4. The virus is named after a river [Option ID = 3379]

Correct Answer :-

- Antiviral drugs are approved by FDA to mitigate the infection [Option ID = 3377]

16) Hypodermoclysis refers to which route of drug administration?

[Question ID = 846]

1. Sublingual [Option ID = 3380]
2. Intradermal [Option ID = 3381]
3. Subcutaneous [Option ID = 3382]
4. Intravenous [Option ID = 3383]

Correct Answer :-

- Subcutaneous [Option ID = 3382]

17) Which of the following is a shortest acting cholinesterase inhibitors enlisted below?

[Question ID = 847]

1. Neostigmine [Option ID = 3384]
2. Pyridostigmine [Option ID = 3385]
3. Edrophonium [Option ID = 3386]
4. Physostigmine [Option ID = 3387]

Correct Answer :-

- Edrophonium [Option ID = 3386]

18) Which of the following is a suitable antidote for mercury poisoning?

[Question ID = 848]

1. Atropine [Option ID = 3388]
2. Dimercaprol [Option ID = 3389]
3. Naloxone [Option ID = 3390]
4. Nalorphine [Option ID = 3391]

Correct Answer :-

- Dimercaprol [Option ID = 3389]

19) Histamine concentration is highest in:-

[Question ID = 849]

1. Beta cells [Option ID = 3392]
2. Mast cells [Option ID = 3393]
3. Lymphocytes [Option ID = 3394]
4. Adipocytes [Option ID = 3395]

Correct Answer :-

- Mast cells [Option ID = 3393]

20) Select the β -lactamase inhibitor.

[Question ID = 850]

1. Griseofulvin [Option ID = 3396]
2. Clavulanic acid [Option ID = 3397]
3. Sulfamethoxazole [Option ID = 3398]
4. Tetracycline [Option ID = 3399]

Correct Answer :-

- Clavulanic acid [Option ID = 3397]

21) The mechanism of action of ciprofloxacin is:-

[Question ID = 851]

1. Inhibition of protein synthesis by interacting with 30s ribosome [Option ID = 3400]
2. Inhibition of protein synthesis by interacting with 50s ribosomes [Option ID = 3401]
3. Inhibition of DNA synthesis by interacting with topoisomerase [Option ID = 3402]
4. Inhibition of cell wall synthesis [Option ID = 3403]

Correct Answer :-

- Inhibition of DNA synthesis by interacting with topoisomerase [Option ID = 3402]

22) Which of the following is NOT CORRECT for myasthenia gravis?

[Question ID = 852]

1. Down regulation of nicotinic receptors (Nm) leads to myasthenia gravis [Option ID = 3404]
2. Tubocurarine is used to treat myasthenia gravis [Option ID = 3405]
3. It is an autoimmune disorder [Option ID = 3406]
4. Thymectomy is treatment option for myasthenia gravis [Option ID = 3407]

Correct Answer :-

- Tubocurarine is used to treat myasthenia gravis [Option ID = 3405]

23) Which of the following describes the effect of Sodium cromoglycate?

[Question ID = 853]

1. Mast cell degranulation [Option ID = 3408]
2. Mast cell stabilization [Option ID = 3409]
3. Leukotriene antagonism [Option ID = 3410]
4. Glucocorticoid receptor agonism [Option ID = 3411]

Correct Answer :-

- Mast cell stabilization [Option ID = 3409]

24) Which of the following side effect of ACE inhibitors result from inhibition of bradykinin breakdown?

[Question ID = 854]

1. Analgesia [Option ID = 3412]
2. Hyperglycaemia [Option ID = 3413]
3. Productive cough [Option ID = 3414]
4. Dry cough [Option ID = 3415]

Correct Answer :-

- Dry cough [Option ID = 3415]

25) Identify antihistamine drug with additional serotonin receptor blocking activity and good appetite stimulant property.

[Question ID = 855]

1. Cyproheptadine [Option ID = 3416]
2. Cimetidine [Option ID = 3417]
3. Ranitidine [Option ID = 3418]
4. Chlorpheniramine [Option ID = 3419]

Correct Answer :-

- Cyproheptadine [Option ID = 3416]

26) Which of the following are the mechanisms of action of digitalis glycosides?

- i. Inhibition of $\text{Na}^+\text{-K}^+$ ATPase enzyme.
- ii. Reduction in the auriculo-ventricular conduction rate.
- iii. Increase in the cardiac output.
- iv. Acceleration of auriculo-ventricular conduction rate.

[Question ID = 856]

1. Only iii [Option ID = 3420]
2. i, ii and iii [Option ID = 3421]
3. ii, iii and iv [Option ID = 3422]
4. Only i [Option ID = 3423]

Correct Answer :-

- i, ii and iii [Option ID = 3421]

27) The following is NOT true for Furosemide:-

[Question ID = 857]

1. Causes hypokalemia [Option ID = 3424]
2. Causes hypouricemia [Option ID = 3425]
3. Causes hypomagnesemia [Option ID = 3426]
4. Acts by inhibiting sodium reabsorption [Option ID = 3427]

Correct Answer :-

- Causes hypouricemia [Option ID = 3425]

28) Which of the following about the Varicella-Zoster Virus (VZV) is NOT true?

[Question ID = 1109]

1. Varicella develops after an individual is exposed to VZV for the first time [Option ID = 4432]
2. Herpes zoster develops from reactivation of the virus later in life [Option ID = 4433]
3. There are no vaccines for this virus [Option ID = 4434]
4. The infection results in post-herpetic neuralgia [Option ID = 4435]

Correct Answer :-

- There are no vaccines for this virus [Option ID = 4434]

