

Solved DCO Exam Paper (RAJASTHAN) – 2012

Time: 2 hours

Max. Marks: 100

Q.1 Mini Pill contains

- a) Estrogen
- b) Non Hormonal Contents
- c) Progesterone
- d) Estrogen and Progesterone

Q.2 Longer use of organic nitrates in Angina pectoris cause one of the following side effect

- a) Hepatotoxicity
- b) Tolerance
- c) Aplastic anemia
- d) Nephrotoxicity

Q.3 Zafirlucast is used as anti-asthmatic acts as

- a) Prostaglandin antagonist
- b) Lipooxygenase Inhibitor
- c) Cyclooxygenase inhibitor
- d) Leukotrine receptor antagonist

Q.4 Phloem does not contain

- a) Phloem fibers
- b) Sieve-tubes
- c) Companion cells
- d) Tracheids

Q.5 Group of plants of a species which have identical morphological characters but differ in their chemical nature known as

- a) Hybrids
- b) Chemodemes
- c) Polyploidy
- d) Mutation

Q.6 Which of the following is the major cause of drug instability?

- a) Oxidation
- b) Photolysis
- c) Hydrolysis
- d) Racemization

Q.7 What is the unit of rate constant for zero order kinetics?

- a)  $s^{-1}$
- b)  $\text{Mol L}^{-1}\text{s}^{-1}$
- c)  $\text{Mol L s}^{-1}$
- d)  $\text{Mol}^{-1}\text{L}^{-1}\text{s}$

Q.8 Talc is used as glidant as

?

- a) 5%
- b) 10%
- c) 15%
- d) 20%

Q.9 The surface material from a tablet that is sticking to and being removed from the tablet's surface by a punch is known as

- a) Capping
- b) Lamination
- c) Sticking
- d) Picking

Q.10 Zeatin

- a) Auxin
- b) Gibberlin
- c) Cytokinin
- d) Abscisic acid

Q.11 Cap Aloe is

- a) Aloe Barbadosis
- b) Aloe Perryi
- c) Aloe Vera
- d) Aloe ferox

Q.12 Most toxic constituent of Red Squill is

- a) Scillaren A
- b) Scillaren B
- c) Scilliroside
- d) Glucosillaren

Q.13 Rutin is rhamanoglucoside of

- a) Scopoletin
- b) Hesperitin
- c) Esculetin
- d) Quercetin

Q.14 Castor oil is

- a) Non drying oil
- b) Semi drying oil
- c) Drying oil
- d) Super drying oil

Q.15 Animal wool fat is

- a) Fat
- b) Lipid
- c) Wax
- d) Fixed oil

Q.16 Hyoscyamus is

- a) Belladonna
- b) Henbane
- c) Stramonium
- d) Duboisia

Q.17 Meuroxide test is used for identification of

- a) Purine
- b) Tropane
- c) Quinoline
- d) Indole

Q.18 Gas sterilization is done by using gas

- a) Ethylene oxide
- b) Formaldehyde
- c) Nitrous oxide
- d) Acetaldehyde

Q.19 Diazotization titration is not used for

- a) Pyrimethamine
- b) Sulphadiazine
- c) Sulfamethoxazole
- d) Thiamine HCl

Q.20 In gas chromatography column length is

- a) 5-10 meter    **b) 1-4 meter**    c) 10-15 meter    d) 15-20 meter
- Q.21 What is the unit of specific conductance?  
a) Ohm    **b) Mho**    c) Ohm cm<sup>-1</sup>    **d) mho cm<sup>-1</sup>**
- Q.22 Which of the following material is not used in the stationary phase of size exclusion chromatography?  
a) Dextran    **b) Agarose**    c) Polyacrylamide    **d) Polyvinyl Alcohol**
- Q.23 Which of the following Indicator is not used in non aqueous titration?  
a) 1-Naphthol benzein    **b) Diphenylamine**    c) Quinaldine Red    **d) Malachite green**
- Q.24 Ecuelle method is used for extraction of  
**a) Lemon oil**    b) Clove oil    c) Camphor oil    d) Palmrosa oil
- Q.25 Peri-winkle is synonym of  
a) Peru Balsam    **b) Ipecac**    **c) Vinica**    d) Guggel
- Q.26 Methylation of cephaelin is converted into  
**a) Emetine**    b) Hydrastine    c) Psychotrine    d) Ipecacuanin
- Q.27 Crocin is obtained from Crocus used as  
**a) Coloring agent**    b) Antipyretic    c) Antirheumatic    **d) Antidiarrhial**
- Q.28 Bromelain is mixture of proteolytic enzyme obtained from  
a) Papaya    **b) Pine apple**    c) Peptone    d) Bacillus subtilis
- Q.29 Opium is found as a salt of .....
- a) Meconic acid**    b) Hydrochoric acid    c) Quinic acid    d) Sulphuric acid
- Q.30 Methyl orange has pH range of  
a) 8.3-10    **b) 1.2-2.9**    **c) 2.8-4.9**    d) 6.8-8.4
- Q.31 Male fern is collected during  
a) Autumn    **b) Late autumn**    c) Summer    d) After Summer
- Q.32 When 0.1 M HCl is titrated with 0.1 M sodium hydroxide using indicator, which type of error occurs?  
a) Hydrogen error    b) Hydroxyl error    c) Acidic error    **d) Alkaline error**
- Q.33 In Glass electrode, platinum wire is inserted in which of the following solution  
**a) 0.1 M Hydrochloric acid**    b) 0.1 M Mercuric chloride    c) 0.1 M Potassium chloride  
d) 0.1 M Potassium Bromide
- Q.34 Absorption maxima goes to longer wavelength is called  
a) Hypochromic shift    **b) Hyperchromic shift**    c) Blue shift    **d) Red shift**
- Q.35 Xenon arc lamp is source of  
**a) Spectrofluoremeter**    b) IR Spectrometer    c) UV-Visible Spectrophotometer    **d) MNR**
- Q.36 What is unit of chemical shift?  
a) Centimeter    **b) cm<sup>-1</sup>**    **c) Part per million**    d) Cycle per second
- Q.37 In Polarography, diffusion current is effected by  
a) Nernest equation    **b) Ilkovic equation**    c) Handerson equation    **d) Gram equation**
- Q.38 Parathyroid gland regulates absorption of calcium. Which of the following is used in hypoparathyrodism  
a) Estrogen    **b) Liothyroxine**    c) Prednisolone    **d) Dihydrotachysterol**
- Q.39 Which of the following drug is used in acute attacks of gout?  
**a) Cholchicine**    b) Probenecid    c) Sulfinpyrazone    d) Allopurinol
- Q.40 Auranofin is used in  
**a) Rheumatoid Artharitis**    b) Gout    c) Hyperglycemia    d) Epilepsy
- Q.41 Which of the following drug is similar to Acarbose in classification

- a) Tolbutamide    b) Glipizide    c) Miglitol    d) Pioglitazoneg
- Q.42 Propyl thiouracil is similar to one of the following drug in pharmacological action?  
a) Azothioprine    b) Chlormbucil    c) Methimazole    d) Acyclovir
- Q.43 Which of the following is pure opioid antagonist?  
a) Butorphanol    b) Nelbupine    c) Buprenorphine    d) Naloxone
- Q.44 Which of following drug causes maximum dependence?  
a) Diethylmorphine    b) Diacetylmorphine    c) Dimethylmorphine    d) Diphenoxylate
- Q.45 Latanoprost has one of the following mechanism of action in glaucoma  
a) Miosis    b) Prostaglandin analogues    c) Carbonic anhydrase inhibitor    d) Decrease formation of aqueous humour.
- Q.46 Lawson is obtained from  
a) Gymnema    b) Liquorice    c) Dioscorea    d) Henna
- Q.47 Which one of the following is used as Osmatic purgative?  
a) Milk of magnesia    b) Senna    c) Extract of rubarb    d) Aluminium hydroxide gel
- Q.48 4 in 10, 000 is calculated as  
a) 4 %    b) 0.04 %    c) 0.4 %    d) 40%
- Q.49 Sodium picrate is used for identification of  
a) Cyanogenic glycoside    b) Isocyanate glycoside    c) Flavanol    d) Anthracene
- Q.50 What portion of oxygen is present in 12% hydrogen peroxide?  
a) 20    b) 40    c) 60    d) 100
- Q.51 Vapour pressure of propellant for aerosols are calculated from  
a) Boyal's law    b) Fick's law    c) Stoke's law    d) Dalton's law
- Q.52 Sedimentation rate of suspension is studied by  
a) Boyal's law    b) Fick's law    c) Stoke's law    d) Dalton's law
- Q.53 Multi point viscometer that is used to determine viscosity  
a) Ostwald Viscometer    b) Capillary Viscometer    c) Falling ball Viscometer  
d) Cup and Bob Viscometer
- Q.54 To study the stress and rate of shear, the phenomenon of converting gel to sol is known as  
a) Plastic flow    b) Pseudo plastic flow    c) Thixotropy    d) Dilatant flow
- Q.55 What is pore size in membrane filter?  
a) 0.5  $\mu\text{m}$     b) 0.22  $\mu\text{m}$     c) 0.45  $\mu\text{m}$     d) 0.1  $\mu\text{m}$
- Q.56 Exotoxins are  
a) are pyrogens    b) are water solble and can pass through proteinous layer  
c) are lipopolysachharide, protein    d) are much less toxic to endotoxin
- Q.57 Cetrimide is  
a) Cationic surfactant    b) Anionic surfactant    c) Nonionic surfactant  
d) Amphiophilic surfactant
- Q.58 Smallest size of capsule most widely used is  
a) 0    b) 5    c) 1    d) 000
- Q.59 Homologous series in hydrocarbons are determined by  
a)  $R_f$  Value    b)  $R_x$  Value    c)  $R_m$  Value    d)  $R_t$  Value
- Q.60 Sodium methoxide is standardized by  
a) Oxallic acid    b) Perchloric acid    c) Acetic acid    d) Benzoic acid
- Q.61 Which of the following is used reference in Electron Spin Resonance?  
a) Tetra methyl silane    b) Dimethyl formamide    c) Di hidro phenyl .....ziricon (DPPH)  
d) Trimethyl silane

- Q.62 What is full form of ICH  
a) International Council of Hormone    b) Indian Conference of Harmonization  
c) International conference of Harmonization    d) International conference of humanity
- Q.63 Which of the following is not related to ICH guideline?  
a) Quality    b) Cost    c) Efficacy    d) Potency
- Q.64 Pertussis potency is standardized by  
a) 3+3 assay    b) Factorial assay    c) Potency is determined by ELISA Test  
d) Potency is determined in fowl
- Q.65 For Cancer cell line culture a HAT nutrient media is required. What is HAT?  
a) Hypoxanthine, Amthopterin, Thymidine    b) Hydroxyuracil, Aminoacid, Thymidine  
c) Hypoxanthine, Aminopterin, Thymine    d) Hypoxanthine, Amthopterin, Thymine
- Q.66 Which of the following does not contain mitochondria?  
a) Flatten fungi    b) Bacteria    c) Protozoa    d) Yeast
- Q.67 Which one of the following is mechanism of Ranitidine?  
a) Prostaglandin release    b) Stimulate gastrin release    c) Stimulate histamine release  
d) Inhibit gastric acid secretion
- Q.68 Which of the following is side effect of Cimetidine?  
a) Diarrhea    b) Constipation    c) Inhibition of hepatic enzyme    d) none of these
- Q.69 Which of the following ion is involved spore formation ?  
a)  $Fe^{2+}$     b)  $Fe^{3+}$     c)  $Zn^{2+}$     d)  $Ca^{2+}$
- Q.70 Southren blot is used for sequencing of neucleotide in probe for  
a) Hybridization of DNA molecule    b) Hybridization of Protein molecule  
c) Hybridization of RNA molecule    d) Hybridization of Glycoside molecule
- Q.71 Fluted bottles are used to pack  
a) Syrup    b) Ointment    c) Linctus    d) Mouth washes
- Q.72 Which of the following is used in scintillation detector ?  
a) Sodium bromide    b) Naphthlene    c) Anthracene    d) Lead sulphate
- Q.73 Which of the following is incorrect about Innate Immunity?  
a) Non specific    b) Invade Foreign microorganism    c) provide immunity which is not affected by infection    d) Give active immunity
- Q.74 Black fluid is  
a) Homogenous coaltar acid solution    b) Suspension of activated charcoal    c) Cresol with soap solution    d) Non of these
- Q.75 Restriction endonuclease is used in recombinant DNA technology in .....reaction  
a) Type I    b) Type II    c) Type III    d) Type III
- Q.76 What is the weight of rectal suppository?  
a) 3-5 g    b) 4 g    c) 2 g    d) 6 g
- Q.77 Fusogen used in hybridoma of monoclonal Antibodies  
a) Polyethylene glycol    b) Tween 40    c) SDS    d) Tween 80
- Q.78 Prophase generation in DNA ligase  
a)  $T_4$  bacteriophage    b) Virus    c) Bacteria    d) Fungi
- Q.79 Engulfment of memberanous organ is done with  
a) Lysosome    b) Endoplasmic reticulum    c) Mesosome    d) Golgi apparatus
- Q.80 Which of the following release cytolytic  $T_4$  prolierating cells that is used in cancer  
a)  $IL_1$     b)  $IL_6$     c)  $IL_8$     d)  $IL_2$
- Q.81 Which is not serological species of Vibrio cholera

- a) Inaba   b) Ogava   c) Hejikoma   **d) Saukton**
- Q.82 10-11 epoxide is metabolic product of  
a) Phenytoin   **b) Carbamezapine**   c) Valproic acid   d) Ethusuximide
- Q.83 Dissociation constant of acid is written as  
**a)  $K_a$**    b)  $pK_a$    c) pH   d)  $K_b$
- Q.84 Noyes witten equation is used for study of  
**a) Dissolution rate**   b) Disintegration rate   c) Dissociation rate   d) Diffusion rate
- Q.85 Enzyme Trypsin is used as  
a) D   b) E   c) Nourishing the cell   **d) Deattachment of cell**
- Q.86 Which of the following organism is used in heterogenous fermentation of lactic acid?  
a) Leuconostoc mesentride   **b) Lactobacillus Bulgaricus**   c) Bacillus oriza   d) Bacillus cereus
- Q.87 Human Immuno Virus (HIV) is  
a) Enveloped DNA   b) Non enveloped DNA   **c) Enveloped RNA**   d) non enveloped RNA
- Q.88 Maximum absorption of drug in gastrointestinal tract is achieved by  
a) Facillated diffusion   b) Active diffusion   c) Active transport   **d) Passive diffusion**
- Q.89 Which of the following drug is MAO-B inhibitor?  
**a) Selegiline**   b) Dopamine   c) Adrenaline   d) Isoprenaline
- Q.90 Which of the following drug is similar to Carbidopa in pharmacological category?  
a) Levodopa   b) Bromocriptine   c) Amantadine   **d) Beneserazide**
- Q.91 What is primary site of action for spironolactone and triameterine?  
a) Proximal tubule   b) Acending tube of henle   c) Descending tube of henle  
**d) distal collecting tubule**
- Q.92 Partial hydrolysis of starch with dilute acid will produce  
a) Chitin   **b) Dextrin**   c) Sumerin   d) glucose
- Q.93 most of the drugs will bind with which of the following plasma protein?  
**a) Albumin**   b) Globulin   c) histone   d) Glycoprotein
- Q.94 Plain vaccine is  
a) Vaccine with single species   **b) vaccine without adjuvant**  
c) Vaccine with adjuvant   d) Synonym of monovalent vaccine
- Q.95 Competition in replication is effected by  
**a) Calcium and heat**   b) Zinc and heat   c) Calcium without heat   d) Zinc without heat
- Q.96 Effective dose of radiation in tissue is measured with  
a) Rontgen   b) REM   **c) RBE**   d) Radiation per unit
- Q.97 Pemidronate is used in  
**a) Pegat's disease**   b) Menneir's disease   c) Hodkin's disease   d) Cushing's disease
- Q.98 Dissolution control absorption of drug through membrane is  
**a) Less than 0.1 mg**   b) 0.1 mg   c) 1 mg   d) 2 mg
- Q.99 In Prophase, the phage vectors are used to transduction of recombinant of phase genome  
a) Virus   b) Enzyme   c) Bacteria   **d) Vectors are bacteriophage  $T_7$  and lamda ( $\lambda$ )**
- Q.100 Which ?  
a) D   b) E   c) D   d) I

**ANSWER KEY [DCO (RAJASTHAN) 2012]**

01 c 21 d 41 c 61 c 81 d  
02 b 22 d 42 c 62 c 82 b  
03 d 23 b 43 d 63 b 83 a  
04 d 24 a 44 b 64 c 84 a  
05 b 25 c 45 b 65 a 85 d  
06 a 26 a 46 d 66 b 86 b  
07 b 27 c 47 a 67 d 87 c  
08 a 28 b 48 b 68 c 88 d  
09 d 29 a 49 a 69 d 89 a  
10 c 30 c 50 b 70 a 90 d  
11 d 31 b 51 d 71 d 91 d  
12 c 32 d 52 c 72 d 92 b  
13 d 33 a 53 d 73 c 93 a  
14 b 34 d 54 b 74 a 94 b  
15 c 35 a 55 b 75 b 95 a  
16 b 36 c 56 b 76 c 96 c  
17 a 37 b 57 a 77 a 97 a  
18 a 38 d 58 b 78 a 98 a  
19 d 39 a 59 a 79 c 99 d  
20 b 40 a 60 d 80 d 100