

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

(MPH/PHD/URS-EE-2019)

## Pharmaceutical Science

Code

**B**

Sr. No. 10002

**SET-“X”**

Time : 1¼ Hours

Total Questions : 100

Max. Marks : 100

Roll No. \_\_\_\_\_ (in figure) \_\_\_\_\_ (in words)

Name : \_\_\_\_\_ Father's Name : \_\_\_\_\_

Mother's Name : \_\_\_\_\_ Date of Examination : \_\_\_\_\_

(Signature of the candidate)

(Signature of the Invigilator)

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/  
INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.**

1. All questions are compulsory.
2. The candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / misbehaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A,B,C and D code will be got uploaded on the university website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E. Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.
5. The candidate **MUST NOT** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers **MUST NOT** be ticked in the Question book-let.
6. **There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.**
7. Use only Black or Blue **BALL POINT PEN** of good quality in the OMR Answer-Sheet.
8. **BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.**





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Question No.	Questions
1.	The end point detector used in Volhard's method is (1) Ammonium ferric sulphate solution (2) Silver nitrate solution (3) Nitrobenzene (4) Potassium thiocyanate solution
2.	Find volume of 95% alcohol required to prepare 600 ml of 70% alcohol (1) 157.90 ml (2) 442.10 ml (3) 542.90 ml (4) 257.90 ml
3.	Under D & C Act 1945 regulation of pharmaceutical documentation is specified in (1) Schedule U (2) Schedule M (3) Schedule L (4) Schedule S
4.	The formation of eutectic mixture is prevented by addition of (1) Kaolin (2) Light magnesium carbonate (3) Citric acid (4) Glycerol
5.	Primary, secondary and tertiary amine can be differentiated by (1) Reaction with Benedict's reagent (2) Reaction with nitrous acid (3) Victor Meyer's method (4) Zeisel's method
6.	Which of the following alkaloid is an antihypertensive (1) Ephedrine (2) Proserpine (3) Vincristine (4) Quinine

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Question No.	Questions
7.	Differential staining of bacterial spores is related to (1) Albert's staining (2) Lugol's staining (3) Moller's staining (4) Indian ink preparation
8.	The number of vittae in cremocarp of fennel is (1) 5 (2) 2 (3) 6 (4) 9
9.	Turpentine liniment does not contain (1) Camphor (2) Soft soap (3) Hard soap (4) Turpentine oil
10.	Iodine vapours for TLC are used to detect the (1) Carboxylic acid (2) Steroids (3) Unsaturated compounds (4) Saturated compounds
11.	Vinca alkaloids exert anti-cancer actions by (1) Inhibition of the function of microtubules (2) Inhibition of DNA synthesis (3) Inhibition of protein synthesis (4) Inhibition of purine synthesis
12.	Which of the following opioid analgesics is used in combination with Droperidol in neuroleptanalgesia (1) Morphine (2) Buprenorphine (3) Fentanyl (4) None of above

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Question No.	Questions
13.	<p>Sulphonylureas act by</p> <p>(1) Reducing the absorption of carbohydrate from the gut</p> <p>(2) Increasing the uptake of glucose in peripheral tissues</p> <p>(3) Reducing the hepatic gluconeogenesis</p> <p>(4) Stimulating the beta islet cells of pancreas to secrete insulin</p>
14.	<p>Which of the following groups of antibiotics demonstrates a bactericidal effect</p> <p>(1) Tetracyclines                      (2) Macrolides</p> <p>(3) Penicillins                         (4) All of the above</p>
15.	<p>Characteristic unwanted reaction which isn't related to a dose or to a pharmacodynamic property of a drug is called</p> <p>(1) Idiosyncrasy                        (2) Hypersensitivity</p> <p>(3) Tolerance                            (4) Teratogenic action</p>
16.	<p>Sedative drugs should</p> <p>(1) Reduce anxiety and exert a calming effect</p> <p>(2) Induce absence of sensation</p> <p>(3) Produce drowsiness, encourage the onset and maintenance of sleep</p> <p>(4) Prevent mood swings in patients with bipolar affective disorders</p>
17.	<p>Two drugs acting on the same tissue or organ through independent receptors resulting in effects in opposite directions. This is known as</p> <p>(1) Physiological antagonism    (2) Competitive antagonism</p> <p>(3) Irreversible antagonism    (4) Chemical antagonism</p>

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Question No.	Questions
18.	Which of the following belongs to tyrosine kinase family of receptors (1) GABA <sub>A</sub> receptors (2) Adrenergic receptors (3) Insulin receptors (4) Dopamine receptors
19.	Which of the following has highest potential for nephrotoxicity (1) Streptomycin (2) Kanamycin (3) Amikacin (4) Gentamicin
20.	Which of the following condition is associated with use of expired tetracyclines (1) Zollinger Ellison syndrome (2) Catatonia. (3) Fanconi syndrome (4) Enterocolitis
21.	The critical value of zeta potential (in mill volts) for a stable colloid except gold sol) is (1) From 20 to 50 (2) From 50 to 100 (3) Less than 20 (4) More than 100
22.	Which one of the following properties is extensively applied for determining the molecular weight of polymers (1) Depression of freezing point (2) Elevation of boiling point (3) Lowering of vapour pressure (4) Osmotic pressure

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Question No.	Questions
29.	The Pharmacy Council of India is constituted by the (1) Central Government                      (2) Parliament (3) Legislative Assembly                    (4) Cabinet
30.	Central Drug Laboratory is located in (1) Lucknow                                      (2) Kasauli (3) Calcutta                                      (4) New Delhi
31.	The preferred source of light in colorimeter is (1) Tungsten lamp                              (2) Hydrogen discharge lamp (3) Mercury arc                                (4) Deuterium lamp
32.	One of the drugs is an odd one in terms of its biological action (1) Diethyl Stilbestrol                        (2) Tamoxifen (3) Ethynyl Estradiol                         (4) Mestranol
33.	One of the following drugs interrupts the synthesis of thyroid hormones by preventing iodine incorporation into the tyrosyl residue of thyroglobulin (1) Levothyroxin                                (2) Liothyronine (3) Carbimazole                                (4) Triiodo thyronine
34.	When two substances have same absorbance, then wavelength is called as (1) Isoelectric point                            (2) Isobestic point (3) Isocratic                                      (4) None of these

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Question No.	Questions
35.	In NMR spectroscopy, shielding of protons is characterized by (1) Chemical shift value is less for strongly shielded protons (2) NMR signals appear at lower magnetic field strength (3) Secondary magnetic field reinforce the applied magnetic field (4) All of these
36.	A substance used for modification of silica gel for reversed-phase TLC is (1) Benzene (2) Glycerin (3) Silicon oil (4) Ether
37.	A solution of thermolabile drug can be sterilized by (1) Bacteria proof filtration (2) Moist heat sterilization (3) Gaseous sterilization (4) Dry heat sterilization
38.	As per IP, the disintegration time for enteric coated tablet is (1) 15 min in distilled water (2) 60 min in simulated intestinal fluid (3) 15 min in simulated gastric fluid (4) 120 min in distilled water
39.	As per GMP, the permitted limit of solid contents in water for injection is (1) 100 ppm (2) 10 ppm (3) 1 ppm (4) 0.1 ppm
40.	The number of NMR signal expected for $\text{CH}_3\text{-CH}_2\text{-Cl}$ is (1) 3 (2) 5 (3) 2 (4) 4

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Question No.	Questions
41.	Karl Fisher reagent used in aquametry is a solution of (1) Bromine and potassium permanganate (2) Sodium thiosulphate and iodine (3) Sodium nitrate and HCl (4) Iodine and sulfur dioxide in pyridine and methanol
42.	The leaves of digitalis purpurea are dried immediately after collection (1) Below 1000C (2) Below 600C (3) Below 250 C (4) At 100C
43.	Emetine an alkaloid of ipecacuanha act as (1) Cough suppressant (2) Bronchodilator (3) Amoebicidal (4) Antimalarial
44.	Which of the following is responsible for the yellow colour of turmeric (1) Camphene (2) Curcumin (3) Zinbiberene (4) $\alpha$ -phellandrene
45.	Cocaine abused/addicted are identified by (1) Yellow coloured urine (2) Yellowish-green coloration of skin (3) Blackened of tongue and gums (4) Their urine turns dark brown on exposure to air





Question No.	Questions
46.	Which of the following antibiotics is not an aminoglycoside (1) Gentamycin (2) Streptomycin (3) Clindamycin (4) Neomycin
47.	Aminoglycosides have the following unwanted effects (1) Pancytopenia (2) Hepatotoxicity (3) Ototoxicity, nephrotoxicity (4) Irritation of gastrointestinal mucosa
48.	Class of tacrolimus is (1) Immunoglobulins (2) Immunosuppressive agents (3) Interferons (4) Monoclonal antibodies
49.	The drug acts by competitively blocking the $\text{Na}^+/\text{K}^+/\text{2Cl}^-$ cotransporter (1) Loop diuretics (2) Thiazide diuretics (3) Potassium-sparing diuretics (4) Carbonic anhydrase inhibitors
50.	This drug is a non-peptide angiotensin AT-1 receptor antagonist (1) Clonidine (2) Captopril (3) Telmisartan (4) Diazoxide
51.	Which of the given ophthalmic product is sterilized by radiations (1) Solution (2) Ointment (3) Suspension (4) All of these

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Question No.	Questions
52.	Microscopic characters of ginger rhizome are (1) Spindle shaped lignified fibres and sclereids (2) Cluster crystals of calcium oxalate and sclereids (3) Non-lignified vessels and sac shaped starch grains (4) Non-lignified fibres and sclereids
53.	Gingko biloba is used for its (1) Expectorant activity            (2) Lipid lowering activity (3) PAF antagonistic activity   (4) Antidepressant activity
54.	Improvement of memory in Alzheimer's disease is brought about by drugs which increase transmission in (1) cholinergic receptors            (2) dopaminergic receptors (3) GABA ergic receptors            (4) adrenergic receptors
55.	An isosteric replacement for carboxylic acid group is (1) pyrrole                                (2) isoxazole (3) phenol                                 (4) tetrazole
56.	X-ray crystallographic analysis of an optically active compound determines its (1) Optical rotatory dispersive power (2) Absolute configuration (3) Relative configuration (4) Optical purity





Question No.	Questions
57.	Which one of the following statements is WRONG ? (1) Carbon NMR is less sensitive than proton NMR (2) $^{12}\text{C}$ nucleus is not magnetically active (3) Both $^{13}\text{C}$ and $^1\text{H}$ have same spin quantum numbers (4) The gyromagnetic ratio of $^1\text{H}$ is lesser than that of $^{13}\text{C}$
58.	In the TCA cycle, at which of the following enzyme-catalyzed steps, incorporation of elements of water into an intermediate of the cycle takes place (1) Citrate synthase (2) Aconitase (3) Maleate dehydrogenase (4) Succinyl Co-A synthase
59.	Select the optimized operating condition for "Autoclave" (1) 121 C for 15-20 min at 15 lb/sq inch (2) 121 C for 15-20 min at 50 lb/sq inch (3) 171 C for 12-20 min at 15 lb/sq inch (4) 151 C for 20-40 min at 15 lb/sq inch
60.	In dose response curve the $E_{\text{max}}$ is the maximal response of the drug at a dose. $ED_{50}$ is (1) The response occurred in 50% of animal population (2) The dose at which response occurs 50% of $E_{\text{max}}$ (3) The dose at which 50% animals shows effect of the drug (4) $ED_{50}$ is not related with the dose of the drug







Question No.	Questions
65.	<p>The role of borax in cold creams is</p> <p>(1) anti-microbial agent</p> <p>(2) to provide fine particles to polish skin</p> <p>(3) in-situ emulsifier</p> <p>(4) antioxidant</p>
66.	<p>Working principle of Ball mill is based on</p> <p>(1) Cutting and Impact      (2) Impact and Attrition</p> <p>(3) Impact only                (4) Attrition only</p>
67.	<p>Expiry period of drug preparations included in Schedule "P" of the Drugs and Cosmetics Rules 1945, can not exceed</p> <p>(1) 12 months from date of manufacture</p> <p>(2) 24 months from date of manufacture</p> <p>(3) 120 months from date of manufacture</p> <p>(4) 60 months from date of manufacture</p>
68.	<p>Ketone bodies are the metabolic end product of</p> <p>(1) Lipids                                (2) Proteins</p> <p>(3) Carbohydrate                      (4) All of these</p>
69.	<p>Indian Pharmacopoeia is published by the</p> <p>(1) Ministry of Health and Family Welfare</p> <p>(2) Pharmacy Council of India</p> <p>(3) Ministry of Human Resources and Development</p> <p>(4) All India Council of Technical Education</p>



Question No.	Questions
70.	A synthetic sweetening agent which is nearly 200 times sweeter than sucrose and has no after taste is (1) Glycerine (2) Saccharin (3) Aspartame (4) Cyclamate
71.	Gelatin I.P. should comply with (1) Limit test for chloride (2) Limit test for sulfate (3) Microbial limits (4) Sterility test
72.	A 50 yr old farmer has a 5 year history of frequent, recurrent and very painful kidney stone. Appropriate chronic therapy for this man is (1) Furosemide (2) Hydrochlorthiazide (3) Morphine (4) Prednisolone
73.	Loss of taste sensation is side effect of following antihypertensive drug (1) Clonidine (2) Captopril (3) Verapamil (4) Prazocin
74.	Different species of <i>Papaver somniferum</i> as <i>P. bracteatum</i> and <i>P. orientale</i> are being cultivated instead of <i>P. somniferum</i> because they contain (1) More of morphine (2) Less of morphine (3) Only codeine (4) Only thebaine
75.	In chromatographic analysis Rf value range from (1) 1-100 (2) 0-1 (3) -1 - +1 (4) 0-10

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Question No.	Questions
76.	What is strength of 95% alcohol in terms of proof spirit (1) 166.63% O.P. (2) 66.53% O.P. (3) 66.53% U.P. (4) 166.53% U.P.
77.	Name the mode by which Vitamin D is metabolized (1) Decarboxylation (2) Methylation (3) Transesterification (4) Hydroxylation
78.	Which of the following enzyme is a constituent of BMP shunt ? (1) Glucose-6-Phosphatase (2) Hexokinase (3) Glucose-6-Phosphate dehydrogenase (4) Phosphorylase
79.	The tissue with highest glycogene content is (1) Liver (2) Kidney (3) Muscle (4) Testes
80.	In IR spectrum, the functional group region is from (1) 4000 cm <sup>-1</sup> to 900 cm <sup>-1</sup> (2) 4000 cm <sup>-1</sup> to 1400 cm <sup>-1</sup> (3) 1400 cm <sup>-1</sup> to 900 cm <sup>-1</sup> (4) 4000 cm <sup>-1</sup> to 660 cm <sup>-1</sup>
81.	Triterpenoids are active constituents of (1) Jaborandi (2) Rhubarb (3) Stramonium (4) Brahmi

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Question No.	Questions
82.	Alkaloids are NOT precipitated by (1) Mayer's reagent (2) Dragendroff Reagent (3) Picric acid (4) Million's reagent
83.	Which of the following drugs has recently been banned due to presence of NMDA a potent carcinogen (1) Astemizole (2) Rosiglitazone (3) Celecoxib (4) Renitidine
84.	Clove contains (1) Eugenol, a sesquiterpenoidal volatile oil (2) Eugenol, a diterpenoidal volatile oil (3) Eugenol, a monoterpenoidal volatile oil (4) Eugenol, a polyterpenoidal volatile oil
85.	Quercetin is (1) A flavonoid, Anti-inflammatory & Antioxidant properties & derived from phenylalanine (2) An Alkaloid, Anti-inflammatory & Antioxidant properties & derived from phenylalanine (3) A flavonoid, Anti-inflammatory & Antioxidant properties & derived from tyramine (4) A Volatile oil, Anti-inflammatory & Antioxidant properties & derived from phenylalanine

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Question No.	Questions
86.	The symptoms of mushroom poisoning include all of the following EXCEPT (1) Salivation, lacrimation, nausea, vomiting (2) Dryness of mouth, hyperpyrexia, hallucination (3) Headache, abdominal colic (4) Bradycardia, hypotension and shock
87.	Pick the reason for the calibration of an instrument (1) Most of the instruments are not reliable (2) To calculate the constant for the instrument (3) To calculate the relative property (4) To correct the errors in the working of an instrument
88.	Plug flow is NOT observed in cone and plate viscometer. The reason is (1) Cleaning and filling of sample is easy (2) Rate of shear is independent of the radius (3) Shear can be maintained uniformly (4) Temperature can be maintained uniformly
89.	Cisplatin is an anticancer drug. It is an example for (1) Chelate type                      (2) Inclusion type (3) Olefin type                        (4) Organic molecular complex
90.	What is the nature of drug, which mostly bind to the human serum albumin (1) Acidic                                (2) Basic (3) Neutral                                (4) Non-ionic

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Question No.	Questions
91.	<p>If the product has been substituted wholly or partially by another drug, it is known as</p> <p>(1) Spurious drug                      (2) Adulterated drug (3) Misbranded drug                      (4) Poisonous drug</p>
92.	<p>If propranolol is given to patient taking oral hypoglycemic agent for diabetes, it may cause</p> <p>(1) Fatal hypoglycemia                      (2) No interaction (3) Tachycardia                      (4) Headache</p>
93.	<p>Proton pump inhibitors like omeprazole and lansoprazole contain the following ring system</p> <p>(1) Pyrimidine                      (2) Benzimidazole (3) Benzothiazole                      (4) Oxindole</p>
94.	<p>Artemisinin contains the following group in its structure</p> <p>(1) an endoperoxide                      (2) an exoperoxide (3) an epoxide                      (4) an acid hydrazide</p>
95.	<p>Mohr's method of end point determination involves</p> <p>(1) Determination of chlorides with the formation of <math>AgCl</math> (2) Determination of flourides with the formation of <math>AgF</math> (3) Determination of chlorides with the formation of <math>NaCl</math> (4) Determination of halides with the formation of <math>AgCl</math></p>

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Question No.	Questions
96.	All of the following drugs are inhaled glucocorticoids EXCEPT (1) Fluticasone (2) Beclometazone (3) Sodium cromoglycate (4) Budesonide
97.	Indicate the drug belonging to proton pump inhibitors (1) Pirenzepine (2) Ranitidine (3) Pantoprazole (4) Trimethaphan
98.	All of these drugs are antiplatelet agents EXCEPT (1) Aspirin (2) Urokinase (3) Ticlopidine (4) Clopidogrel
99.	This drug is a Class IA antiarrhythmic drug (1) Sotalol (2) Propranolol (3) Verapamil (4) Quinidine
100.	Which of the following drugs is a reversible nonselective alfa, beta antagonist (1) Labetalol (2) Phentolamine (3) Metoprolol (4) Propranolol

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