UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Roll No. .....

Subject: Pharmacy Practice-IV (Hospital Pharmacy) (New Course) Time: 2 Hrs. 30 Min. Marks: 80

Paper: 1 Part – II

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt any *FOUR* questions. Each question carries equal marks.

2	a)	Draw a flow diagram of a tertiary care hospital organogram (Mayo hospital) and common organizational grouping.	10
	b)	Describe the criteria of medicine selection and the processes involved in the development and adapting of standard treatment guidelines.	10
3	a)	Categorize the controlled drug substances according to schedules and describe hospital control procedures for these drugs.	10
	b)	Describe strategies and solutions to overcome medication errors.	10
4	a)	Discuss dispensing to out-patients and other services provided to the patients.	10
	b)	Discuss dispensing to patients during off-hours.	10
5	a)	What are investigational drugs and their uses.	10
	b)	Describe the criteria in medicine selection, the potential benefits, and problems with the hospital formulary.	10
6	a)	Explain the relationship between purchasing, distribution, and clinical pharmacy services.	10
	b)	Enlist generic name, pharmacological class, side effects, contraindications, dosage form, and strength of the following drugs Panadol, Brufen, Dicloran, Voltral, Glucophage, Disprin, Augmentin, Cefspan, Azomax, Inderal	10

UNIVERSITY OF THE PUNJAB

Roll No. in Fig. .....

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Roll No. in Words. .....

Subject: Pharmacy Practice-IV (Hospital Pharmacy) (New Course)

.....

Paper: 1 Part – I (Compulsory) Time: 30 Min. Marks: 20

.....

This Paper will be collected back after expiry of time limit mentioned above, then Subjective paper shall be attempted. Signature of Supdt.:

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Q.1. Encircle the right answer cutting and overwriting is not allowed. (20x1=20)

1. Which one of the followings is NOT an aggregate drug consumption review
   a) VEN analysis
   b) ABC analysis
   c) Drug utilization patterns
   d) None of the above
2. Pharmacy and therapeutic committee maintain transparency by selecting members
   a) Having best expertise
   b) Having top positions
   c) Declaring no conflict of interests
   d) Having experience in the pharmaceutical industries
3. Medicine selection criteria require specification of the drug by
   a) Brand names
   b) International non-proprietary name
   c) Generic name
   d) Both B & C
4. The pharmacy and therapeutic committee (PTC) should review the formulary list every
   a) One year
   b) 2 – 3 years
   c) Six months
   d) 5 years
5. Non-confrontational ways of monitoring and addressing medication error by PTC include
   a) Mention the name of doctor but not of pharmacist & nurse
   b) Mention the name of a pharmacist & nurse but not of a doctor
   c) Not mentioning the name of doctor, pharmacist and nurse
   d) None of the above
6. The drug order forms prepared in triplicates, have original copy in pharmacy, second copy for billing procedures, and the third copy is:
   a) Accounts department
   b) Hospital records
   c) Placed in patient profile
   d) Entered in data base
7. When medicine is dispensed by a nursing supervisor from a pharmacy, he or she is prohibited to:
   a) Dispense from night cabinets
   b) Use the floor stock system
   c) Compounding the mixtures
   d) use the resuscitation cart
8. The emergency box is also known as the:
   a) Stat box
   b) Resuscitation cart
   c) Life-saving box
   d) Three-dimensionalnal box
9. Each nursing area has _____ dosage forms on hand for patient dispensing in a floor stock system:
   a) 50 to 100
   b) 100 to 110
   c) 10 to 100
   d) 10 to 150
10. The lay out design of sterile room must be so as to ensure the following facts, except
    a) Separation of non-sterile areas from sterile
    b) No entrance of contaminated items from one end
    c) Passing of material through various sterilizers
    d) Sterile room located with the waste management areas

11. The space allocation for the sterile room, keeping in mind the adequate spaces for autoclaving, dissembling and assembling etc, depends upon:
    a) The size of hospital
    b) The particulate count
    c) The autoclaving capacity
    d) The sizes of the instruments installed
12. An institutional group delegated with the responsibilities of investigation, developing, and standardizing procedures and equipment called:
    a) The standardization committee
    b) The drug regulatory authority
    c) National procedural committee
    d) World standards and procedure committee
13. The _____ of the committee is responsible for gathering all samples and prices of materials and data dealing with any procedure:
    a) Chairman
    b) Secretary
    c) Head-Pharmacist
    d) CEO
14. Giving a drug dose, not authorized for a particular patient, gives rise to a:
    a) Authorized drug error
    b) Un-authorized drug error
    c) Wrong-dose error
    d) Dosage form error
15. Z-track is a _____ technique, used for the medications that stain upper tissues:
    a) Preventive
    b) Authorized medical
    c) Intra dermal insertion
    d) Intramuscularlar injection
16. A quiet, clear-glazed and a sized purpose-built facility for storage and preparation of medications, is called:
    a) Medication room
    b) Provision room
    c) Drug-dispensing room
    d) Monitoring room
17. Galenical formulations to be used in a hospital come under the category of:
    a) I/V Admixture
    b) Bulk compounding
    c) Sterile manufacturing
    d) I/V Additives
18. Aggregate drug consumption review VEN stands for
    a) Vital emergency & narcotics
    b) Vital emergency & non-essential
    c) Vital essential and non-essential
    d) None of the above
19. Pharmacist acts as _____ of pharmacy and therapeutic committee
    a. Chairman
    b. Member
    c. Secretary
    d. Registrar
20. Technitium-99m is used as radionuclide where 'm' represents
    a. Metastatic
    b. Metabolic
    c. Metastable
    d. Metallic

UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Roll No. .....

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course) Time: 2 Hrs. 30 Min. Marks: 80

Paper: 2 Part – II

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt any *FOUR* questions. Each question carries equal marks.

Question No. 2	A. Write the values and clinical significance of the following:- a) Platelets b) BUN c) Calcium and Chloride d) Bilirubin e) LDH	05
	B. Give abridged and unabridged definitions of clinical Pharmacy. What is the role of a clinical pharmacist?	15
Question No. 3	A. Define hypertension. What are compelling indications and pharmacological approaches used?	10
	B. Write a treatment plan for ischemic heart disease.	10
Question No. 4	A. Define adverse drug reactions (ADRs). Explain the DoTS classification system.	10
	B. Write about the transmission and diagnosis of H. pylori positive ulcer and its management.	10
Question No. 5	A. Define pharmaceutical care and discuss it in multiple environments.	10
	B. What is COPD? Give treatment of this problem.	10
Question No. 6	A. Briefly discuss the clinical findings and management of irritable bowel disease.	10
	B. What are the clinical characteristics, symptoms, and complications of Diarrhea?	10
Question No. 7	A. Write a detailed not on the merits and demerits of a research study question, and how to turn a research question into a proposal considering the bias, confounding, ethics, planning, and selection of variables.	10
	B. Classify Drug-drug interactions. Describe with examples, drug-drug interactions at Absorption levels.	10

UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Subject: Pharmacy Practice-V (Clinical Pharmacy-I) (New Course)

Paper: 2 Part – I (Compulsory) Time: 30 Min. Marks: 20

Roll No. in Fig. .....

Roll No. in Words. .....

.....

.....

Signature of Supdt.:

This Paper will be collected back after expiry of time limit mentioned above, then Subjective paper shall be attempted.

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Q.1. Encircle the right answer cutting and overwriting is not allowed. (20x1=20)

1. The concept of pharmaceutical care was formally presented in the year
   a) 1999
   b) 1991
   c) 2000
   d) 2005
2. Creatinine clearance is the measure of the function of _____
   a) Kidney
   b) Liver
   c) Heart
   d) Lungs
3. The level of potassium (K) in the serum is _____
   a) 10-15 mEq/L
   b) 3.5-5.5 mEq/L
   c) 5.0-12 mEq/L
   d) 100-150 mEq/L
4. Power analysis will help a researcher to
   a) Determine a sample size
   b) Determine population distribution
   c) Determine confidence interval
   d) Determine scientific validity
5. Myocardial infarction is caused by occlusion in _____
   a) Carotid vessel
   b) Pulmonary vessel
   c) Coronary vessel
   d) Peripheral vessel
6. Heart failure is characterized by drop in the percentage of
   a) Ejection fraction
   b) Blood
   c) Plasma
   d) Stroke volume
7. Any indication that exists along with hypertension is known as _____
   a) Side effect
   b) Compelling indication
   c) Intruding indication
   d) Adverse indication
8. Adverse drug reactions are reported through a system constituting
   a) Emergency reporting system
   b) Spontaneous reporting system
   c) Alarm reporting system
   d) Quick reporting system
9. The ultimate result of toxicity caused by drugs in the body is
   a) Apoptosis
   b) Mitosis
   c) Sclerosis
   d) Necrosis
10. A low threshold to pharmacological action is said to be
    a) Tolerance
    b) Idiosyncrasy
    c) Allergic reaction
    d) Side-effect

P.T.O.

11. Type-B adverse drug reactions include
    a) Side-effects
    b) Hypersensitivity
    c) Allergic reactions
    d) Both (b) & (c)
12. In children, younder than 1 year, the dose is calculated by using
    a) Cowling's equation
    b) Young's equation
    c) Fried's Equation
    d) Clark's equation
13. At steady state
    a) Rate of drug absorption is equal to the rate of drug clearance
    b) Rate of drug metabolism is equal to the rate of drug clearance
    c) Rate of drug distribution is equal to the rate of drug clearance
    d) Rate of drug clearance is equal to the rate of protein binding
14. A Physician orders 1 unit of Insulin injection SC for every 10mg/dl of blood sugar over 170 mg/dl. How many units of insulin should be administered if the patient's blood glucose is 220 mg/dl?
    a) 10 Units
    b) 8 Units
    c) 5 Units
    d) 4 Units
15. If an insulin vial of 10 ml contains 200 Units of insulin per milliliter and patient is required to take 20 units twice daily. How many days will the product last for the patient?
    a) 66.7 days
    b) 20 days
    c) 50 days
    d) 10 days
16. The energy (Kcal) provided by per gram of glucose monohydrate is
    a) 3.8 Kcal
    b) 3.4 Kcal
    c) 4 Kcal
    d) 3.9 Kcal
17. A non-selective beta-blocker that has been extensively studied and used in decreasing portal pressure include
    a) Timolol
    b) Sotalol
    c) Misoprostol
    d) Propranolol
18. Which one of the following is the most specific non-invasive test for H. pylori?
    a) Endoscopy
    b) Endoscopy with biopsy
    c) C-Urea breath test
    d) Serology
19. Which one of the followings is the common cause of diarrhea in infants?
    a) Cryptosporidium
    b) Shigellosis
    c) Rotavirus
    d) Vibrio cholera
20. Which one of the followings is NOT the complication of watery diarrhea
    a) Tetany
    b) Dehydration
    c) Renal failure
    d) Perforation

UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Roll No. .....

Subject: Pharmaceutics-IV (Industrial Pharmacy) (New Course) Time: 2 Hrs. 30 Min. Marks: 80

Paper: 3 Part – II

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt any *FOUR* questions. Each question carries equal marks.

Q2. A) Describe different factors, which effect the flowability of Powders. (12)

B) Briefly describe the following. (2×4=8)

i) Significance of Heckle plot
ii) Apparent density, true density
iii) True volume and Granular volume
iv) Compressibility and tapped density

Q3.A) Draw and label the diagram of freeze dryer and discuss its pharmaceutical application. (10)

B) Describe the defects of film coating and their remedies (10)

Q4. A) Define filtration Aids and what are various filter aid materials? (5)

B) Draw the diagram, working, construction and discuss the advantages and disadvantages of meta filter and rotary filter. (15)

Q5 A) Differentiate between drying and evaporation and discuss various factors affecting the evaporation. (10)

B) Draw the diagram and discuss the principle, advantages and disadvantages of evaporating pan and still evaporators. (10)

Q6 A) Define milling. Describe construction, working and advantages of Feitz Patrick mill. (10)

B) Define drying; classify the dryers based on methods of solid handling. (10)

Q7 A) Define heat transfer. Briefly explain the different methods of heat transfer.(10)

B) Define Compaction and discuss the different stages involved in powder compression.(10)

UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Subject: Pharmaceutics-IV (Industrial Pharmacy) (New Course)

Paper: 3 Part – I (Compulsory) Time: 30 Min. Marks: 20

Roll No. in Fig. .....

Roll No. in Words. .....

.....

.....

Signature of Supdt.:

This Paper will be collected back after expiry of time limit mentioned above, then Subjective paper shall be attempted.

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Q.1. Encircle the right answer cutting and overwriting is not allowed. (20x1=20)

1. Mode of mass transfer, when bulk is not moving?
   a. eddy diffusion b. Convective mass transfer
   c. Molecular diffusion d. None of above
2. Mode of mass transfer, when bulk is moving?
   a. eddy diffusion b. Molecular diffusion
   c. Forced diffusion d. Thermal diffusion
3. Eddy diffusion is analogous to heat transfer by?
   a. conduction b. Convection
   c. Radiation d. All of above
4. Fires involving ordinary combustible materials, such as Paper, wood, and textile fibers
   a. class A b. Class B
   c. class C d. Class E
5. In particle sizing, size range in µm, with optical microscopy is_____.
   a. 0.001-5 b. 0.01-5
   c. 0.5-150 d. 1-50
6. Brunauer, Emmett and Teller (BET) nitrogen adsorption method is used for determination of?
   a. particle density b. Particle size
   c. particle surface area d. Bulk density
7. Porosity is determined by_____.
   a. Vb/Vv b. Vt-Vb/Vt
   c. 1-Vb/Vt d. 100*[1-Vt/Vb]
8. With increase in Hausner's ratio, flowability _____.
   a. increase b. Decrease
   c. Remains constant d. May increase or decrease
9. Fires involving combustible metals such as magnesium, sodium, potassium, titanium, and aluminum
   a. Class A b. Class B
   c. Cass C d. Class D
10. For fixed funnel method for determination of angle of repose, which statement is true?
   a. height of funnel is changing
   b. diameter of heap is fixed
   c. height of funnel is fixed
   d. uses circular disc with sharp edges
11. For free flowing solid particles, value of angle of repose is____.
   a. 20-30 b. 30-40
   c. 40-50 d. .50
12. If angle of repose is above 50, it means_____.
   a. excellent flow b. Poor flow
   c. flow with difficulty d. No flowability
13. Granules produced from which method have relatively high porosity?
   a. Dry granulation b. Wet massing
   c. Fluidized-bed technique d. Shear mixers

P.T.O.

14. you are to prepare granules but your powder is sensitive to heat, which method you will prefer ?

a. shear granulators
b. rollor granulators
c. spheronizers
d. Spray drying

15. To prepare granules for programmed or controlled release systems, which method you will prefer?

a. shear granulators
b. High-speed granulators
b. fluidized bed granulators
d. spheronizers

16. In high-speed granulators, impeller revolves in_____?

a. vertical plane
b. Horizontal plane
c. tangential plane
d. All

17. In high-speed granulators, granulating liquid is added when_____?

a. impeller blades are turning
b. chopper blades are turning
c. both impeller and chopper blades are turning
d. both impeller and chopper are stopped

18. Which of following is gravity feed extruder?

a. gear roll
b. Axial extruder
c. radial extruder
d. Ram extruder

19. In slugging, which mill is suitable for breaking compacts?

a. cutting mill
b. Hammer mill
c. pin mill
d. Ball mill

20. Which of following is example of Chemical asphyxiant?

a. HCN
b. Methanol
c. benzene
d. Ammonia

UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Roll No. .....

Subject: Pharmaceutics-V (Biopharmaceutics & Pharmacokinetics)

Paper: 4 Part – II (New Course) Time: 2 Hrs. 30 Min. Marks: 80

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt any *FOUR* questions. Each question carries equal marks.

Q.2.	a)	How does biopharmaceutical properties of drugs affect the design of dosage form?	15 Marks
	b)	What are different physiological factors which affect drug bioavailability?	5 Marks
Q.3.	a)	Describe the process of therapeutic drug monitoring.	8 Marks
	b)	Illustrate and give steps to determine the distribution rate constant in two compartment open model after intravenous administration.	12 Marks
Q.4.	a)	How are steady state concentration (C_{ss}), Pre-C_{ss}, and Post-C_{ss}, are computed for I/V infusion after one compartment model?	10 Marks
	b)	Give details of the different designs of Dosage Regimens.	10 Marks
Q.5.	a)	Differentiate between drug clearance and drug excretion.	8 Marks
	b)	What is non-linear pharmacokinetics? Explain the reasons for nonlinear kinetics?	4+8 Marks
Q.6.	a)	Define IVIVC. Describe multi-level C correlation.	2+6 Marks
	b)	What is non-compartmental approach? Describe trapezoidal method for area under the curve. Give formula for extrapolated AUMC ($AUMC_{t-\infty}$).	1+7+4 Marks
Q.7.		Write short notes on the following: i) Factors influencing drug variability ii) Enterohepatic cycling iii) Flip-flop model	8+8+4 Marks

UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Subject: Pharmaceutics-V (Biopharmaceutics & Pharmacokinetics)

Paper: 4 Part – I (Compulsory) (New Course) Time: 30 Min. Marks: 20

Roll No. in Fig. .....

Roll No. in Words. .....

.....

.....

Signature of Supdt.:

This Paper will be collected back after expiry of time limit mentioned above, then Subjective paper shall be attempted.

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Q.1. Encircle the right answer cutting and overwriting is not allowed. (20x1=20)

1. **In plasma level time curve, the time is:**
   (a) taken on y-axis (b) taken on x-axis (c) a dependent variable (d) unknown
2. **The total clearance is appropriately expressed as:**
   (a) ml/ml (b) mg/min (c) mg/h/kg (d) mg/l
3. **The most frequently assumed order of kinetics in disposition kinetics is:**
   (a) first order (b) zero order (c) saturation kinetics order (d) Pseudo first order
4. **The Zero order kinetics on semi-log graph is:**
   (a) upward curve (b) linear (c) nonlinear at initial portion (d) nonlinear at terminal portion
5. **A semi-log graph paper has:**
   (a) linear scale on both axis (b) log scale on y axis (c) Log scale on axis (d) Log scale on both axis
6. **The zero value in concentration-time data is delt as:**
   (a) Converted to log (b) Converted to $\log_{10}$ (c) Drawn as such on graph (d) Ignored and not drawn
7. **In one compartment open model after IV administration:**
   (a) $C_0 = 0$ (b) m is computed from residual curve (c) Y-intercept is equal to C_0 (d) C_0 is measurable
8. **Number of compartments on plasma level time profile is decided from the:**
   (a) absorption curve (b) elimination curve (c) distribution curve (d) disposition curve
9. **For computation of AUC at the first time interval in EV, 1-compartment model, C_{n-1} considered as:**
   (a) zero (b) summation of y intercepts (c) concentration at time zero (d) concentration at 1st time interval
10. **Volume of distribution is a parameter for:**
    (a) distribution (b) metabolism (c) absorption (d) excretion
11. **Method of residual in 2-compartment model after IV administration resolves plasma level curve into:**
    (a) 1-linear component (b) 2-linear component (c) 1-linear & 1-nonlinear components
    (d) 2-non-linear components
12. **The IV infusion represents:**
    (a) first order input-zero order output (b) first order input- first order output
    (c) zero order input- zero order output (d) zero order input-first order output
13. **Protein binding causes transitorily:**
    (a) increased drug potency (b) elevated metabolism (c) drug inactivation (d) increased pharmacological effect
14. **Drug products containing the same therapeutic moiety but different salts, dosage forms or strengths are:**
    (a) pharmaceutical equivalents (b) pharmaceutical alternatives (c) therapeutic alternatives (d) therapeutic equivalents
15. **Comparative areas under the curves (AUCs) after oral and I/V administration is called:**
    (a) absolute bioavailability (b). bioequivalence (c). relative bioavailability (d). Bioavailability
16. **Therapeutic drug monitoring is necessary in following situations EXCEPT when a drug has:**
    (a) narrow therapeutic index (b) non-linear pharmacokinetics
    (c) concentration in blood unrelated to clinical outcome (d) large individual variation in blood concentration
17. **The major parameter(s) in establishing a dosage regimen is/are:**
    (a) size of drug (dose) (b) administration frequency (τ) (c) C_{max} (d) both A and B
18. **The aim of multiple doses is to achieve drug concentration which provides the following EXCEPT:**
    (a) no drug accumulation (b) minimum fluctuations (c) increased bioavailability (d) maintained concentration
19. **In multiple dosing, higher accumulation of drug is expected if a drug has:**
    (a) smaller rate of elimination (b) longer half-life (c) smaller clearance (d) all A, B, and C
20. **The amount of solid substance that goes into solution per unit time under standard conditions is:**
    (a) dissolution (b) solubility (c) disintegration (d) miscibility

UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Roll No. .....

Subject: Pharmaceutics-VI (Pharmaceutical Quality Management)

Paper: 5 Part – II (New Course)

Time: 2 Hrs. 30 Min. Marks: 80

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt any *FOUR* questions. Each question carries equal marks.

Q.2 a) Classify the glass materials used in pharmacy. Discuss the method to determine the alkalinity of glass and interpretation of results. (15)

b) Why leaker test is performed. Discuss various Leaker tests performed during IPQC testing of Parenteral. (05)

Q.3 a) What is the purpose of Bioassays? Discuss the Graded Response assays in detail. (12)

b) Discuss the titrimetric and turbidimetric microbiological assays of Vitamin-B_{12}. (08)

Q.4 a) Write a note on 10 principles of Good Manufacturing Practice in detail (10)

b)) Define sterility test of injection, Discuss in detail procedure and interpretation of its results. (10)

5 a) Classify different semisolid dosage forms. Write a detail note on QC test performed on oinments. (10)

b) Discribe the Principal and Microbiological assay of Antibiotics. (10)

Q.6 a) Discuss different methods of the moisture contents determination. (15)

b) Define LOD. How the Loss on drying will be determined. (05)

Q.7 a) b) Define dissolution How the dissolution of uncoated tablets will be performed, also discuss interpretation of result. (10)

b) Differentiate the responsibilities of Quality control and Quality assurance departments in a pharmaceutical industry (05)

c) Discuss the Good Manufacturing Practices in Pharmaceutical industries in relation to microbiology. (05)

UNIVERSITY OF THE PUNJAB

Roll No. in Fig. .....

Doctor of Pharmacy (Pharm.D.) 4th Prof: Annual Exam–2022

Roll No. in Words. .....

Subject: Pharmaceutics-VI (Pharmaceutical Quality Management)

.....

Paper: 5 Part – I (Compulsory) (New Course) Time: 30 Min. Marks: 20

.....

This Paper will be collected back after expiry of time limit mentioned above, then Subjective paper shall be attempted. Signature of Supdt.:

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Q.1. Encircle the right answer cutting and overwriting is not allowed. (20x1=20)

1 For Particle size determination material is diluted with

A) Water C) PEG

B) Glycerol D) Alcohal

2. For the acid insoluble ash method, which of acid is used.....

A) H2SO4 C) Nitric acid

B) Acetic acid D) HCl

3. Toxicity tests should be performed for all types of

A) Anthelmintics C) Vaccines

B) Antifungals D) Antibacterials

4 In Karl fisher titrimetric method water is quantitatively measured by titration under ..... conditions

A) Hydrous C) Hydrophilic

B) Anhydrous D) Aseptic

5 Initially..... suppositories are taken to perform content uniformity test

A) 20 C) 15

B) 10 D) 25

6 Which kind of residue are burnt during ignition process....

A) Organic C) Inorganic

B) Sodium D) Calcium

7 What are the limits of 0.02N H2SO4 in ml for treated soda lime glass

A) 1.1ml C) 1.25ml

B) 0.7 ml D) 0.85ml

8 Vaccine derived from toxins secreted by certain species of bacteria:

A) BCG C) Small pox

B) Hemophilus Influenza Type B D) Diphtheria

9.Clarity test is one of QC test of

A) Lotion C) Injections

B) Suspension D) Liniments

10 In alkaloidal assay, during pulverization avoid the loss of....

A) Water C) Minerals

B) Inorganic materials D) Organic matter

11 Loss on drying is expressed as ...

A) v/v C) w/ml

B) w/L D) m/m

P.T.O.

12 The process to ensure the production quality meets the required standards is called:

A) QC
C) QA
B) GLP
D) GMP

13 Methylene Blue is used for....

A) Pyrogen test
C) Light obstruction test
B) Leaker test
D) Sterility test

14 Hypoglycemic convulsions check induced by insulin in the mice is the example of:

A) Graded response
C) Endpoint Response
B) Quantal response
D) Qualitative Response

15 The mixture of microbes along with the culture media in which it is growing.

A) Slant
C) Microbial suspension
B) Streak
D) Inoculum

16 According to British Pharmacopoeia, the percentage difference acceptable for tablets weighing 250 mg or more is _____

A) ± 5.0 %
C) ± 7.5 %
B) ± 10.0 %
D) ± 3.0 %

17 Pore size of membrane used for sterilization of injection is .....

A) 0.34 µm
C) 0.45 µm
B) 0.50 µm
D) 0.25 µm

18 Following type of viscosity is independent of the surrounding conditions

A) Dynamic viscosity
C) Absolute viscosity
B) Kinematic viscosity
D) Relative viscosity

19 To repeat the disintegration test ..... more tablets are tested.

A) 10
C) 12
B) 17
D) 20

20 Enteric coated tablets are prepared to avoid..... environment

A) intestinal
C) liver
B) gastric
D) Neutral