



ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

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

Question no 2:

- a) Define pathological calcification. Give examples (6)
- b) What is apoptosis? Describe the mechanism of apoptosis (4)

Question no 3:

- c) What is necrosis? Briefly describe its different types (5)
- d) Name different chemical mediators of inflammation with their functions? (5)

Question no 4:

- a) What are the differences between primary and secondary wound healing? (5)
- b) What are the factors that affect wound healing (5)

Question no 5:

- A) What is shock ? What are its different types? Briefly discuss (5)
- B) Briefly describe type III hypersensitivity reaction (5)

Question no 6

Write short notes on

- A) Granuloma (4)
- B) Endogenous pigmentation. (3)
- C) Apoptosis (3)



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Roll No.

Subject: Pharmacology & Therapeutics-II (New Course)
Paper: 2 Part - II

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. Classify SULPHONAMIDES; describe their MOA, pharmacokinetics, adverse effects and therapeutic uses. (20)
- Q 3. Classify FLUOROQUINOLONES, describe antibacterial spectrum of activity, mechanism of action, adverse effects and uses. (20)
- Q 4. a) Define with examples (10)
1. Bacteriostatic and Bactericidal
 2. MIC and MBC
 3. Time-dependent killing and Conc. Dependent killing
 4. Cmax and Tmax
 5. Post antibiotic effect (PAE)
- b) Describe antibiotic resistance mechanisms in bacteria. (10)
- Q 5. a) Define LOCAL ANESTHETICS? Classify local anesthetics. Discuss mechanism of action & pharmacological actions of local anesthetics (15)
- b) Explain PRE-ANESTHETIC MEDICATIONS (05)
- Q 6. Classify ANTI-EPILEPTICS. Describe mechanism of action, pharmacological and adverse effects of PHENYTOIN? (20)
- Q 7. Classify OPIOIDS. Explain mechanism of action, therapeutic uses and adverse effects of MORPHINE. (20)



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Subject: Pharmacology & Therapeutics-II (New Course)

Paper: 2 Part - I (Compulsory)

Time: 30 Min. Marks: 20

Roll No. in Fig.

Roll No. in Words.

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 correct option.

(20x1=20)

1. First generation cephalosporins are effective against
 - a) *Streptococci* and *S. aureus*
 - b) *E. coli* and *H. influenza*
 - c) *Bacteroides spp.*
 - d) *P. aeruginosa* and *N. gonorrhoea*
2. Resistance to gentamycin indicates resistance to
 - a) Tobramycin
 - b) Amikacin
 - c) Kenamycin
 - d) All
3. Following aminoglycoside has the broadest antimicrobial spectrum
 - a) Tobramycin
 - b) Amikacin
 - c) Netilmicin
 - d) Kenamycin
4. Drug administered to minimize side effects of isoniazid?
 - a) Rifampin
 - b) Ethambutol
 - c) Pyridoxine
 - d) Pyrazinamide
5. Following agent is used orally for treatment of vulvovaginal candidiasis
 - a) Butoconazole
 - b) Miconazole
 - c) Fluconazole
 - d) Tioconazole
6. Following is GABA-A agonist,
 - a) Chlordiazepoxide
 - b) Baclofen
 - c) Bicuculline
 - d) None
7. The major reason why carbidopa is of value in parkinsonism is that the compound
 - a) Crosses BBB
 - b) Inhibits MAO-A
 - c) Inhibits aromatic L-amino acid decarboxylase
 - d) Is converted to the false neurotransmitter carbidopamine
8. Which one of the following is drug of choice in obsessive compulsive disorders (OCD)?
 - a) Amitriptyline
 - b) Bupropion
 - c) Clomipramine
 - d) Desipramine
9. Which of the following inhaled anesthetics can produce hepatic necrosis?
 - a) Soveflurane
 - b) Desflurane
 - c) Halothane
 - d) Nitrous oxide
10. State of "general anesthesia" usually includes,
 - a) Analgesia
 - b) Loss of consciousness, inhibition of sensory and autonomic reflexes
 - c) Amnesia
 - d) All

11. Inhaled anesthetics and intravenous agents having general anesthetic properties,
- a) Directly activate GABA receptors
 - b) Facilitate GABA action but have no direct action on GABAA receptors
 - c) Reduce excitatory glutamatergic neurotransmission
 - d) Increase duration of opening of nicotine-activated potassium channels
12. An ideal anesthetic drug would,
- a) Induces anesthesia smoothly and rapidly and secure rapid recovery
 - b) Possess a wide margin of safety
 - c) Has a minimal adverse effects
 - d) All
13. Which of the following general anesthetics belongs to inhalants?
- a) Thiopental
 - b) Desfluran
 - c) Ketamine
 - d) Propofol
14. The intravenous anesthetic is,
- a) Propofol
 - b) Halothane
 - c) Desflurane
 - d) Nitrous oxide
15. Ethosuximide used in?
- a) Complex partial seizure
 - b) myoclonic seizure
 - c) Absence seizure
 - d) Tonic clonic seizure
16. Entacapone is useful because it
- a) inhibits DOPA decarboxylase
 - b) is a D2 receptor agonist
 - c) blocks peripheral COMT
 - d) is an MAO-B inhibitor
17. Regarding acyclovir, which of the following statements is correct?
- (a) It acts to inhibit viral entry into cells
 - (b) It is a guanosine analogue
 - (c) It is commonly given in doses of 10-20 mg TDS
 - (d) It is used to treat CMV
18. Which of the following statements is correct regarding Amantadine?
- (a) It potentiates dopaminergic function
 - (b) It is an antiviral drug
 - (c) It causes acute psychosis
 - (d) All of the above
19. Ultra-short-acting barbiturate used as an intravenous anesthetic,
- a) Fentanyl
 - b) Thiopental
 - c) Midazolam
 - d) Ketamine
20. Following is not an example of carboxypenicillin
- a) Mezlocillin
 - b) Ticarcillin
 - c) Piperacillin
 - d) Nafcillin



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Roll No.

Subject: Pharmacognosy-II (Advanced) (New Course)

Paper: 3 Part - II

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 What is chromatography and explain chromatographic techniques for the isolation of natural compounds. 20

Q:3 Define cardioactive glycosides? Describe any two crude drugs possessing cardioactive effect? 20

Q:4 What are resins? What are the different types of resin combinations? Explain cannabis in detail. 20

Q:5; Define and classify lipids and discuss in details various chemical tests used for the identification of lipids. 20

Q:6: Define Alkaloids .How the alkaloid's are extracted from plants. Describe cinchona in detail. 20

Q:7 Give chemical structures and therapeutic uses of the following drugs, 20

- a) Ephedrine
- b) Physostigmine
- c) Vanillin
- d) Limonene



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Subject: Pharmacognosy-II (Advanced) (New Course)

Paper: 3 Part - I (Compulsory)

Time: 30 Min. Marks: 20

Roll No. in Fig.

Roll No. in Words.

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 correct option.

(20x1=20)

- i. Which of the following Pharmaceutical aid is also known as "Vegetable gelatin"
 - a. Acacia
 - b. Tragacanth
 - c. Sodium alginate
 - d. Agar
- ii. Planer Chromatography includes
 - a. TLC
 - b. Paper chromatography
 - c. Column chromatography
 - d. both a and b
- iii. HPLC columns are made up of _____
 - a. Pyrex glass
 - b. Stainless steel
 - c. Silver
 - d. Gold plated
- iv. Balsams are rich in
 - a. Cinnamic acid
 - b. Benzoic acid
 - c. Tannic acid
 - d. Cinnamic acid and benzoic acid
- v. Which one of the volatile oil is solid stearoptenes
 - a. Menthol
 - b. Eugenol
 - c. Methyl salicylate
 - d. Eucalyptol
- vi. Dioscorea different species are known to present a rich source of
 - a. Progesterone
 - b. Cortisone
 - c. Fixed oils
 - d. Alkaloids
- vii. Limonene is a
 - a. Monocyclic Monoterpene
 - b. Bicylic Monoterpene
 - c. Diterpene
 - d. Triterpene
- viii. Terpinol is the product of
 - a. Oxalic acid
 - b. Turpentine oil
 - c. Cinnamic acid
 - d. Tannic acid
- ix. A solid stationary phase and a gaseous mobile phase is referred to _____
 - a. Partition chromatography
 - b. Ion exchange chromatography
 - c. Gel chromatography
 - d. Gas chromatography
- x. All partition chromatographic separations are based upon the differences in _____
 - a. Partition coefficients
 - b. Partition characteristics
 - c. Chemical shift
 - d. Non polar nature

- xi. Counter ions in ion exchange chromatography are
- | | |
|---------------------------|-------------------------|
| a. Replaceable ions | b. Non replaceable ions |
| c. Moderately replaceable | d. None of these |
- xii. The ability of the gels to retard the movement of a substance down a column packed with gel depends upon
- | | |
|---------------|-------------------|
| a. Polarity | b. Absorption |
| c. Adsorption | d. Molecular size |
- xiii. Resins are soluble in
- | | |
|--------------|----------------|
| a. Water | b. Ethanol |
| c. Olive oil | d. Coconut oil |
- xiv. The pungency of the ginger is due to
- | | |
|------------------|---------------|
| a. Volatile oils | b. Oleoresins |
| c. Resins | d. Gums |
- xv. Sedative principal of cannabis is
- | | |
|--------------------|--------------------------|
| a. Cannbinol | b. Tetrahydrocannabinols |
| c. Cannabichromeme | d. Cannabigerol |
- xvi. Allyl isothiocyanate is a
- | | |
|--------------|-------------------|
| a. Alkaloid | b. Local irritant |
| c. Stimulant | d. Carminative |
- xvii. Sennoside A and B composed of dimeric aglycones which are
- | | |
|-----------|----------------------|
| a. Emodin | b. Aloe-emodin |
| c. Aloin | d. Chrysophanic acid |
- xviii. Free anthraquinone aglycone are responsible for _____.
- | | |
|--------------------------------|-------------------------------|
| a. Little therapeutic activity | b. Major therapeutic activity |
| c. Carminative effect | d. Aroma |
- xix. Emetine is active constituent of
- | | |
|-------------|--------------|
| a. Ipecac | b. Digitalis |
| c. Cannabis | d. Ephedra |
- xx. Fixed oil and fats differ only as to _____.
- | | |
|-------------------|----------------------|
| a. Boiling point | b. Melting point |
| c. Freezing point | d. None of the above |



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Roll No.

Subject: Pharmacy Practice-II (Dispensing, Community, Social & Administrative Pharmacy) (New Course)

Paper: 4 Part - II

Time: 2 Hrs. 30 Min. Marks: 80

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt *FOUR* questions in all by selecting *TWO* questions from each part.
Each question carries equal marks.

Part I (Dispensing Pharmacy)

- Q1. Define Pharmaceutical Incompatibilities? Classify and discuss Therapeutic Incompatibilities in detail? (20)
- Q2. Briefly discuss the general method for the preparation of ointments? Describe the method for incorporating liquids in ointment bases? (20)
- Q3. a) Define Prescription. Discuss parts of Prescription (10)
- b) Briefly describe the followings: (10)
- i. Components of label of a dispensed product
 - ii. Suspending Agents used in the preparation of Suspension

Part II (Community Pharmacy)

- Q1. What are different types of Pharmacoeconomics methods and provide detail discussion of Cost utility analysis and cost benefit analysis with examples (20)
- Q2. Define community pharmacy, briefly discuss CDC and drug utilization analysis (20)
- Q3. Describe patient's counseling content and process items and how to minimize barriers of counseling? (20)



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Subject: Pharmacy Practice-II (Dispensing, Community,
Social & Administrative Pharmacy) (New Course)

Paper: 4 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 correct option.

(20x1=20)

- Incorporation of finely divided insoluble solid into the base is called _____**
 - Wet grinding
 - Homogenization
 - Trituration
 - Both A and C
- The discard date of extemporaneously prepared ointments and pastes is _____**
 - Three months
 - One month
 - One week
 - Two weeks
- Continental method would use oil: aqueous phase: gum ratio of _____ to make primary emulsion.**
 - 4:3:1
 - 4:3:2
 - 2: 2:1
 - 4:2:1
- O/W type of emulsifying agent have the HLB value in range of _____**
 - 8-18
 - 13-15
 - 3-6
 - 7-9
- Size 3 capsule has the capacity to fill _____ of powder.**
 - 150 mg
 - 250 mg
 - 450 mg
 - 200 mg
- Following are the in-diffusible solids EXCEPT**
 - Light Kaolin BP
 - Zinc oxide BP
 - Calamine BP
 - Aspirin BP
- Recently Prepared' should be applied to compounded items that are likely to deteriorate if stored for a period greater than four weeks when maintained at _____**
 - 4-8 °C
 - 15-25 °C
 - Below 15 °C
 - None of above
- Powders should be stored at _____**
 - Cool place
 - Room temperature
 - Dry place
 - Refrigerator
- Emulsions for oral use are usually packed in _____**
 - Amber fluted bottle
 - Amber flat bottle
 - Clear glass bottle
 - Ribbed flat bottle
- Which of the following is used as preservatives?**
 - Benzoyl alcohol
 - Lactose
 - Methylcellulose
 - Citric acid

11. Buffers are the components of pharmaceutical preparations for pH stabilization, following type of buffers are exclusively used external preparations.
- Citrate buffer
 - Borate buffer
 - Phosphate buffer
 - Carbonate buffers
12. The discard date written of the auxiliary label of "diluted oral solutions" is usually
- 2 weeks
 - 4 weeks
 - 2 months
 - 3 months
13. What weight of sodium chloride (in grams) would be required to make 750 mL of normal saline solution?
- 5.50
 - 6.75
 - 7.50
 - 9.50
14. The main objective of patient communication in education and counseling is to——
- Understand the illness experience of patient
 - Ensure correct diagnosis and therapy
 - Build therapeutic alliance
 - Both, A & C
15. Open ended questions provide you with——
- More in depth information
 - Precise information
 - Force him/her to defend his choices
 - None of the above
16. During education & counseling session lack of privacy or furniture is an example of——
- Psychological barrier
 - Physical barrier
 - Administrative barrier
 - Personal barrier
17. The first step in Patient education is ASSESSMENT, which include assessment of ——
- Drug efficacy
 - Adherence
 - Needs, concerns and preferences
 - Concomitant illness
18. Which of the following not included in experimental studies?
- Prospective study
 - Interventional study
 - Retrospective study
 - Analytical study
19. The foremost part of planning in patient education is to build bridges between patient's
- Adherence and self-care
 - Therapy and outcomes
 - Needs and concerns
 - None of the above
20. One of the DON'T in warfarin counseling is not to tell patient
- To call their doctor if noticed bleeding
 - That warfarin is used to slow blood clotting
 - List of all the reasons anyone might be on warfarin
 - None of the above



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Roll No.

Subject: Pharmaceutical Chemistry-III (Pharmaceutical Analysis)
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.

No. of question	Question	Marks
Q.2	a. Explain the following; (2*5 =10 marks) 1. Phosphorescence 2. Spectrum 3. Scalar coupling 4. Tetramethylsilane 5. Beer-Lambert law b. Explain the factors affecting the fluorimetric measurements. (10 marks)	20
Q.3	a) Describe thermogravimetric analysis (TGA) giving example of CuSO ₄ . (10 marks) b) Describe complexometric titrations. (10 marks)	20
Q.4	Write Note On. a) Plate theory of chromatography. (10 marks) b) Liquid column chromatography. (10 marks)	20
Q-5	Discuss in detail basic Principle, Instrumentation, sampling techniques and application of IR spectroscopy.	20
Q.6	Define the term Chromatography, Discuss in detail basic Principle, Instrumentation, and application of gas chromatography	20
Q. 7	a) Define reference electrode and describe composition and working of Ag/AgCl electrode. (10 marks) b) Define retention time, partition coefficient, selectivity factor, resolution and capacity factor. (10 marks)	20



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Subject: Pharmaceutical Chemistry-III (Pharmaceutical Analysis)

Paper: 5 Part - I (Compulsory) (New Course)

Time: 30 Min. Marks: 20

Roll No. in Fig.

Roll No. in Words.

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.

(20x1=20)

Q.1. Encircle the correct option.

- Which of the following spectroscopic technique is used solely for qualitative analysis?
 - Infra-Red spectroscopy
 - UV/Vis spectroscopy
 - Molecular fluorescence and phosphorescence spectrometry
 - Atomic absorption spectroscopy
- Which of the following is true for phosphorescence?
 - The luminescent radiation emitted when electrons at higher energy state come back to the ground state with opposite spin.
 - The luminescent radiation emitted when electrons at higher energy state come back to the ground state with same spin.
 - The change in the angle of incident EMR upon interaction with atoms or molecules.
 - The movement of incident radiation in random directions upon interaction with the matter.
- How many regions of IR spectrum contains?
 - 3
 - 2
 - 4
 - 5
- The pressure used in mass spectrometer vacuum system ranges between which of the following?
 - $10^{-4} - 10^{-6}$
 - $10^{-4} - 10^{-7}$
 - $10^{-4} - 10^{-8}$
 - $10^{-4} - 10^{-9}$
- Which of the following is used for chromatography of volatile and low molecular weight compound?
 - Ion exchange chromatography
 - Thin layer chromatography
 - Liquid chromatography
 - Gas chromatography
- Which of the following is used for the determination of functional groups?
 - IR spectroscopy
 - Mass spectrometry
 - DSC
 - NMR
- Which of the following is independent of mobile phase velocity?
 - Resistance to mass transfer in mobile phase
 - Longitudinal diffusion
 - Eddy's diffusion
 - Resistance to mass transfer in stationary phase
 - DSC
 - NMR
- Which of the following is true for isotones?
 - These are atoms of different elements having the same number of neutrons.
 - These are atoms of different elements having the same mass number (A) but different atomic number (Z).
 - These are atoms of the same element having the same atomic number (Z) but different mass number (A).
 - These are atoms of the same element having the same atomic number (Z) but same mass number (A).
- The radio activity per unit mass is known by which of the following?
 - Baquerel
 - Curie
 - Specific activity
 - Radioactive concentration
- How many types of mass analyzers are used in mass spectrometry?
 - 3
 - 2
 - 4
 - 5

11. Which of the following is correct for ideal chromatography?
- a. $K=1$
 - b. $K=1/2$
 - c. $K=3/2$
 - d. $K=Zero$
12. Residual current in polarography is due to which of the following?
- a. Analyte
 - b. Dissolved O_2
 - c. Bubbled N_2
 - d. Inert electrolyte
13. Which of the following acids is used as a solvent in non-aqueous titrations?
- a. Perchloric acid
 - b. Acetic acid
 - c. Glacial acetic acid
 - d. Formic acid
14. Which of the following is used for sampling from heterogenous material?
- a. Random sampling
 - b. Convenient sampling
 - c. Multiple sampling
 - d. Probability sampling
15. Which of the following has 100% relative abundance?
- a. Hetero atom ion peak
 - b. Metastable ion peak
 - c. Molecular ion peak
 - d. Base peak
16. In which of the following sample is fed continuously?
- a. Frontal analysis
 - b. Displacement analysis
 - c. Isocratic elution
 - d. Gradient elution
17. In reversed phase chromatography which of the following elutes first?
- a. Neutral
 - b. Polar
 - c. Nonpolar
 - d. Zwitterion
18. Gel permeation is used for which of the following?
- a. Ionic compounds
 - b. High molecular size
 - c. Low molecular size
 - d. Volatile compounds
19. Which of the following is correct for Normal solution?
- a- No. of equivalents per litre
 - b- No. of moles per litre
 - c- No. of moles per kilogram
 - d- No. of equivalents per kilogram
20. $(TR-TM)/TM$ is used to calculate which of the following?
- a- HETP
 - b- Resolution
 - c- Void volume
 - d- Capacity factor



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Subject: Pharmacy Practice-III (Computer & its Application in Pharmacy)

Paper: 6 Part - I (Compulsory)

(New Course)

Time: 30 Min. Marks: 20

Roll No. in Fig.

Roll No. in Words.

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 correct option.

(20x1=20)

1. The only language which the computer understands is _____
 - A. Assembly Language
 - B. Binary Language
 - C. BASIC
 - D. C Language
2. The smallest unit of data in computer is _____
 - A. Byte
 - B. Nibble
 - C. Bit
 - D. KB
3. Information is
 - A. Data
 - B. Processed Data
 - C. Manipulated input
 - D. Computer output
4. All computers have common basic functions which are
 - A. Recording, processing, and output
 - B. Input, storage, and merging
 - C. Processing, sorting, classifying, and output
 - D. Input, processing, storage, and output
5. A _____ monitor looks like a television and are normally used with non-portable computer systems.
 - A. CRT
 - B. LCD
 - C. LED
 - D. Flat Panel Monitors
6. Which of the following is non-volatile storage?
 - A. Backup
 - B. Secondary
 - C. Primary
 - D. Cache
7. Which of the following is not a characteristic of a computer?
 - A. Diligence
 - B. I.Q.
 - C. Accuracy
 - D. Versatility
8. Input and Output devices such as monitors and keyboards are classified as
 - A. Arithmetic Units
 - B. Control Unit Devices
 - C. Peripheral Devices
 - D. Main Store Devices
9. Notebook PCs fall into a category of devices called
 - A. Mobile Computers
 - B. Desktop Computers
 - C. Hybrid Computers
 - D. Tabulators
10. Central Processing Unit contains _____
 - A. Random Access Memory
 - B. Read Only Memory
 - C. Cache Memory
 - D. Virtual Memory

11. A device used for video games, flight simulators, training simulators and for controlling industrial robots.

- A. Mouse
- B. Light pen
- C. Joystick
- D. Keyboard

12. What does USB stand for?

- A. Universal Signal Board
- B. Universal Signal Bus
- C. Universal Serial Bus
- D. Universal Serial Board

13. Which of the following is a temporary output?

- A. Hard copy
- B. Soft copy
- C. Duplicate copy
- D. On paper

14. Which of the following is not an example of system software?

- A. Language Translator
- B. Utility Software
- C. Communication Software
- D. Word Processors

15. The arranging of data in a logical sequence is called

- A. Sorting
- B. Classifying
- C. Reproducing
- D. Summarizing

16. A software that can be freely accessed and modified.

- A. Synchronous Software
- B. Package Software
- C. Open-Source Software
- D. Middleware

17. When a file is saved for the first time

- A. A copy is automatically printed
- B. It must be given a name to identify it
- C. It does not need a name
- D. It only needs a name if it is not going to be printed

18. Which of the following statement is wrong?

- A. Photoshop is a graphical design tool by Adobe
- B. Linux is free and open-source software
- C. Windows 10 is a system software
- D. Microsoft Word is an operating system

19. System Restore Utility can enable us to restore

- A. system state
- B. drives data where OS is not installed
- C. your personal files
- D. option a & b both

20. The main role of data de-fragmentation is to

- A. Increase the data access speed
- B. Secure your data from viruses
- C. Stop unauthorized use of data
- D. None of the Above



UNIVERSITY OF THE PUNJAB

Doctor of Pharmacy (Pharm.D.) Third Prof: Annual Exam-2022

Roll No.

Subject: Pharmacy Practice-III (Computer & its Application in Pharmacy)

Paper: 6 Part - II (New Course)

Time: 2 Hrs. 30 Min. Marks: 30

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Note: Attempt ALL questions. Each question carries equal marks.

Q.2. (06)
How does the computer technology be used to enhance the performance of a pharmaceutical professional?

Q.3. (06)
What is the difference between systems analysis and systems design?

Q.4. (06)
What are the likely benefits of using computer at community pharmacy? Briefly discuss.

Q.5. (06)
a) What are the functions of computer systems in hospital pharmacy?
b) Write a detailed note on computer-aided drug utilization review.

Q.6. (06)
Define the following terms briefly. Each term should be defined no more than six lines.
i. Secondary Storage Devices
ii. Virus and Anti-Virus
iii. Name any five software application^s for data analysis.