

**Assistant Professor (Contractual)**  
**Pharmaceutical Science and Technology**

Name of the Candidate अभ्यर्थी का नाम (In Capital Letters)	Roll No. अनुक्रमांक
Roll No. in words: ..... रोल नं. शब्दों में .....	<b>CENTRE SEAL</b>
Signature of the Candidate अभ्यर्थी के हस्ताक्षर	Signature of Invigilator निरीक्षक के हस्ताक्षर
Candidate's Thumb Impression	

**DURATION: 1 HOURS**

**Important Instructions**

**समय: 1 घंटे**

1. Before opening the SEAL of the Question Booklet, write your Name, Roll Number (in figures and words) and put your signature in the space provided on the top of the Question Booklet. The candidate will be disqualified if this instruction is not followed by him/her.
2. Each question carries ONE mark, No marks will be awarded for unattempted questions. **NO NEGATIVE MARKING FOR WRONG ANSWER.**
3. Use of electronic calculator, log tables, slide rule is not permitted.
4. Candidate will be allowed to leave the examination hall at the end of examination time only after depositing Question Booklet duly filled answers on the space provided at the bottom of this page, otherwise candidate will be disqualified.
5. If a candidate is found in possession of books or any other printed or written material from which he/she might take irregular assistance, he/she is liable to be treated as disqualified. Similarly, if a candidate is found giving or obtaining (or attempt to give or obtain) assistance from any source, he/she is liable to be disqualified. Carrying mobile phone and its use in examination hall is strictly prohibited.
6. Use **BLUE or BLACK BALL POINT PEN** only to fill the Answers in the Answer Sheet. Use of whitener is strictly prohibited.

**ANSWER SHEET**

QN.1	QN.2	QN.3	QN.4	QN.5	QN.6	QN.7	QN.8	QN.9	QN.10	Office Use
QN.11	QN.12	QN.13	QN.14	QN.15	QN.16	QN.17	QN.18	QN.19	QN.20	
QN.21	QN.22	QN.23	QN.24	QN.25	QN.26	QN.27	QN.28	QN.29	QN.30	
QN.31	QN.32	QN.33	QN.34	QN.35	QN.36	QN.37	QN.38	QN.39	QN.40	
QN.41	QN.42	QN.43	QN.44	QN.45	QN.46	QN.47	QN.48	QN.49	QN.50	
QN.51	QN.52	QN.53	QN.54	QN.55	QN.56	QN.57	QN.58	QN.59	QN.60	

**Total Marks Obtained:**

Do not open the SECURITY SEAL of Question Booklet until the Commencement of examination time or instructed to do so.  
 कृपया प्रश्न पुस्तिका की SECURITY SEAL को परीक्षा अवधि प्रारंभ होने अथवा ऐसे निर्देश दिये जाने तक न खोलें।

- 1: Depth filtration is based on the mechanism of
  - A. Attractive forces
  - B. Impingement
  - C. Straining
  - D. Entanglement
- 2: Which two steps are involved in plate and frame process?
  - A. Filtration operation & Washing operation
  - B. Filtration operation & Drying operation
  - C. Washing operation & Drying operation
  - D. Mixing operation & filtration operation
- 3: Water number means
  - A. Maximum amount of water that can be added to 100 g of a base at given temperature
  - B. Maximum amount of water that can be added to 10 g of a base at given temperature
  - C. Maximum amount of water that can be added to 5 g of a base at given temperature
  - D. None
- 4: According to USP, glycerol-gelatin base contains how much of gelatin.
  - A. 14%
  - B. 16%
  - C. 18%
  - D. 20%
- 5: All of the following have 100% oral bioavailability EXCEPT
  - A. Valproic acid
  - B. Trimethoprim
  - C. Digoxin
  - D. Diazepam
- 6: Regarding receptor regulation
  - A. Receptor down regulation occurs over hours – days
  - B. Receptor responses to drugs often “desensitise” with time – this desensitisation is usually irreversible
  - C. All “internalised” receptors are degraded by lysosomes
  - D. None of the above are correct
- 7: Particle size is determined by
  - A. Gas Chromatography
  - B. Cascade impactor
  - C. Light scatter decay
  - D. Both b & c
- 8: In cyclone separator, the powder is separated depending on its
  - A. Particle size
  - B. Density of particles
  - C. Shape of particles
  - D. Both (a) & (b)
- 9: What should the concentration of alcohol which is used as menstruum in multiple maceration process.
  - A. 20-25%
  - B. 30-35%

- C. 40-45%
- D. 50-55%

10: Hydrous wool fat (Absorption base) is a mixture of.

- A. Wool fat - 70% & Water -30%
- B. Wool fat - 60% & Water -40%
- C. Wool fat - 50% & Water -50%
- D. Wool fat - 80% & Water -20%

11: For a drug that is eliminated primarily by renal glomerular filtration, the theoretical maximum clearance is approximately:

- A. 1-2 milliliters/min
- B. 12 milliliters/min
- C. 120 milliliters/min
- D. 1250 milliliters/min

12: The half life of a drug eliminated by first order elimination kinetics will be LONGER in individuals who have an

- A. Increased volume of distribution or increased clearance
- B. Increased volume of distribution or decreased clearance
- C. Decreased volume of distribution or increased clearance
- D. Decreased volume of distribution or decreased clearance

13: Schedule D as per D&C act 1940 is concerned with

- A. List of drugs exempted from the provision of import of drugs
- B. Disease or ailments which a drug may not be purport to prevent or cure
- C. Requirements of factory premises
- D. List of prescription drugs

14: Match the following

- |                                 |                       |
|---------------------------------|-----------------------|
| (a) Central Council             | i) Sec 3              |
| (b) Education Regulation        | ii) Sec 10            |
| (c) State Pharmacy Council      | iii) Sec 20 Chapter 3 |
| (d) Registration of Pharmacists | iv) Chapter 4         |

- A. (a) iii, (b) i, (c) iv, (d) ii
- B. (a) iii, (b) i, (c) iv, (d) ii
- C. (a) i, (b) ii, (c) iii, (d) iv
- D. (a) ii, (b) iii, (c) iv, (d) i

15: Match the following Act with their objective

- |                               |  |
|-------------------------------|--|
| a) Pharmacy Act               | i) Prohibition of misleading advertisement |
| b) Drugs Price control order  | ii) Regulatory framework for fair pricing  |
| c) N.D.P.S.A. 1985            | iii) Regulation of pharmacy profession     |
| d) Drugs & Magic remedies Act | iv) Regulation & control of Narcotic drugs |

- A. a-iii, b-ii, c-iv, d-i
- B. a-iii, b-ii, c-iv, d-i
- C. a-i, b-iii, c-ii, d-iv
- D. a-iv, b-ii, c-i, d-iii

- 16: Biological Oxygen Demand (BOD) is a measure of
- A. Extent to which water is polluted with organic compounds
  - B. Industrial wastes poured into water bodies
  - C. Amount of carbon monoxide inseparably combined with haemoglobin
  - D. Amount of oxygen needed by green plants during night
- 17: pH required for the growth of bacteria is
- A. 6.8 – 7.2
  - B. 5.6 – 8.2
  - C. 3.0 – 6.0
  - D. 8.0 – 14.0
- 18: What will be the approximate  $T_{max}$  of a drug exhibiting  $K_a$  of  $2 \text{ hr}^{-1}$  and  $K$  of  $0.2 \text{ hr}^{-1}$ ?
- A. 2.4 hr
  - B. 4.8 hr
  - C. 1.2 hr
  - D. 2.0 hr
- 19: Half life time of a drug can determine all of the following except
- A. Closing interval
  - B. Therapeutic dose
  - C. Elimination time
  - D. Steady plasma concentration
- 20: Under non-compartment analysis the following formula is used for calculation
- A.  $MRT = AUMC / AUC$
  - B.  $AUMC = MRT / AUC$
  - C.  $MRT = AUC / AUMC$
  - D.  $AUC = AUMC / MRT$
- 21: Amoebiasis is an infection of
- A. Gastrointestinal tract
  - B. Respiratory tract
  - C. Urinary tract
  - D. Reproductive tract
- 22: Which of the following vaccine is specific and highly immunogenic?
- A. Protein-based subunit vaccine
  - B. Polysaccharide vaccine
  - C. Conjugate vaccine
  - D. Toxoid vaccine
- 23: For a carcinogenicity study, a drug is expected in clinical use for at least
- A. 2 months
  - B. 4 months
  - C. 6 months
  - D. 8 months
- 24: A genotoxic substance primarily damages
- A. RNA
  - B. DNA
  - C. t-RNA
  - D. m-RNA

25: Pharmacovigilance includes

- A. Toxic effects of a drug
- B. Side effects of a drug
- C. Therapeutic effect of a drug
- D. Adverse effects of a drug

26: Adverse effect is

- A. Desired and tolerated
- B. Undesired and not tolerated
- C. Desired and not tolerated
- D. Undesired and tolerated

27: Regional pharmacovigilance center is attached to

- A. Private clinic
- B. Private hospital
- C. Nursing home
- D. Medical College

28: Pharmacovigilance Program of India is first launched at

- A. AIIMS Bhatinda
- B. AIIMS Bhubaneswar
- C. AIIMS New Delhi
- D. Banaras Hindu University

29: On which year Indian Pharmacopoeia Commission is considered as National Coordinating Centre for the Pharmacovigilance Program of India?

- A. 2010
- B. 2011
- C. 2012
- D. 2015

30: Which of the following is not an MAO-A inhibitor?

- A. Selegiline
- B. Brofaromine
- C. Clorgyline
- D. Moclobemide

31: The following analgesic lacks anti-inflammatory action

- A. Paracetamol
- B. Ibuprofen
- C. Diclofenac
- D. Piroxicam

32: Acrylamide is

- A. Hepatotoxin
- B. Neurotoxin
- C. Urotoxic
- D. Eye toxin

33: Name the signaling which requires physical contact between the cells involved

- A. Paracrine Signaling
- B. Autocrine Signaling
- C. Juxtacrine Signaling

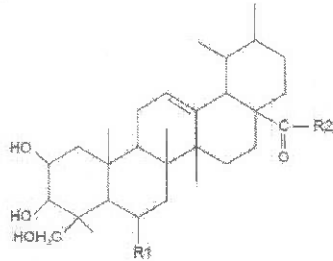
- D. All of the above
- 34: Which of the following is NOT a neurodegenerative disorder?
- A. Amyotrophic lateral sclerosis
  - B. Lewy body disease
  - C. Thalassemia
  - D. Friedreich's ataxia
- 35: 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine is a neurotoxin that is used in animals to induce
- A. Parkinson's disease
  - B. Anxiety
  - C. Depression
  - D. Multiple sclerosis
- 36: Which of the following drug is extensively evaluated in the elevated plus maze test?
- A. Anti-depressant
  - B. Anxiolytic
  - C. Sedative
  - D. Analgesic
- 37: Which of the following drug is evaluated against scopolamine-induced amnesia in mice?
- A. Anti-Parkinsonian drug
  - B. Anti-Alzheimer agent
  - C. Anti-depressant
  - D. Analgesic
- 38: Tail suspension test is used for the evaluation of
- A. Anxiolytics
  - B. Anti-depressants
  - C. Anti-Alzheimer's
  - D. None
- 39: Modified behavior despair test is used for the evaluation of
- A. Anxiolytics
  - B. Anti-depressants
  - C. Anti-Alzheimer's
  - D. Sedatives
- 40: Which abnormal behavior of the animal is used for the evaluation of the anti-depressant activity of a drug in a forced swim test?
- A. Swimming
  - B. Mobility
  - C. Immobility
  - D. None
- 41: Which of the following cannabinoids is narcotic?
- A. Cannabichromene
  - B. Tetrahydrocannabinol
  - C. Cannabigerol
  - D. Cannabinol
- 42: Source of tragacanth is
- A. *Astragalus gummifer* (Leguminose)
  - B. *Gelidium amanswerii* (Leguminose)
  - C. *Acacia arabica* (Leguminose)

D. *Cyamopsis tetragonolobus* (Leguminose)

43: Heating of sucrose produce

- A. Caramel
- B. Inulin
- C. Starch
- D. Pectin

44: If R1 is -OH and R2 is -O-glu-glu-rha, identify the phytocompound.



- A. Madecassoside
- B. Madecassic acid
- C. Asiaticoside
- D. Asiatic acid

45: Which phytoconstituent used as adsorbent?

- A. Arabin
- B. Tragacanthin
- C. Pectin
- D. Bassorin

46:  $\beta$  Citranellol is present in .....oil.

- A. Vetiver oil
- B. Geranium
- C. Mentha
- D. Sandalwood

47: Tulsi leaves have mainly ..... type of stomata.

- A. Diacytic
- B. Anisocytic
- C. Anomocytic
- D. Paracytic

48: Inulin obtained from *Inula helenium* (compositae) is used as diagnostic agent to access

- A. Glomerular filtration rate
- B. Renal blood flow rate
- C. Blood volume
- D. Blood glucose

49: Which of the given present in starch?

- A. Agarose & agarpectin
- B. Amylose & amylopectin
- C. Arabin & oxidase, peroxidase
- D. Tragacanthin & bassorin

50: Swelling factor of *Plantago ovata* seed is

- A. 4 - 5
- B. 5 -10
- C. 15 - 20
- D. 10 - 14

51: An example of C-glycoside is

- A. Barbaloin

- B. Sennoside
  - C. Sinigrin
  - D. Nucleoside
- 52: Tomato lycopenes are used as nutraceuticals mainly for.....
- A. Prostate support
  - B. Arthritis support
  - C. Diabetic support
  - D. Digestive support
- 53: How to get fixed oil for medical purpose?
- A. by extraction with a cold organic solvent
  - B. by warm expression
  - C. by extraction with cold water
  - D. by cold expression
- 54: Which type of glycoside present in aloe?
- A. C-glycosides
  - B. O-glycosides
  - C. S- glycosides
  - D. N-glycoside
- 55: Side effects like headache and restlessness can occur due to which ingredient of Kanakasava?
- A. Munakka
  - B. Datura
  - C. Bharangi
  - D. Sonth
- 56: Which of the following drug(s) contain(s) citric acid in a large amount?
- A) Bearberry leaf
  - B) Elder flower
  - C) Herniariae herba
  - D) Tamarindi fructus
- 57: Whose name of the followings is associated with the discovery of morphine?
- A. Caventou
  - B. Sertürner
  - C. Stoll
  - D. Pelletier
- 58: Isothiocyanate glycosides are present in
- A. Gingko
  - B. Wild cherry bark
  - C. Mustard
  - D. Liquorice
- 59: The characteristic odour of onion bulbs is due to
- A. Quercetin glycosides
  - B. Furostanol glycosides
  - C. Alkyl or alkenyl disulphides
  - D. Heterogenous sulphated polysaccharides
- 60: Sātavari is obtained from
- A. *Asparagus racemosus* (Liliaceae)
  - B. *Quillaia saponaria* (Rosaceae)
  - C. *Dioscorea deltoidea* (Dioscoreaceae)
  - D. *Urginea maritime* (Liliaceae)



### Answer Key for Pharmaceutical Science & Technology Final

1	D	21	A	41	B
2	A	22	A	42	A
3	A	23	C	43	A
4	D	24	B	44	A
5	C	25	D	45	C
6	A	26	B	46	B
7	D	27	D	47	A
8	D	28	C	48	A
9	A	29	B	49	B
10	A	30	A	50	D
11	C	31	A	51	A
12	B	32	B	52	A
13	A	33	C	53	D
14	*	34	C	54	A
15	*	35	A	55	B
16	A	36	B	56	D
17	A	37	B	57	B
18	C	38	B	58	C
19	B	39	B	59	C
20	A	40	C	60	A

\* Options A & B are identical, for question no. 14 & 15. Marks have been awarded to all candidates for these two questions.