

# National Testing Agency

**Question Paper Name:** GPAT2020 28th Jan 2020 Shift 2 Set 3  
**Subject Name:** GPAT2020  
**Creation Date:** 2020-01-28 18:43:15  
**Duration:** 180  
**Total Marks:** 500  
**Display Marks:** Yes

## GPAT2020

**Group Number :** 1  
**Group Id :** 40503636  
**Group Maximum Duration :** 0  
**Group Minimum Duration :** 180  
**Show Attended Group? :** No  
**Edit Attended Group? :** No  
**Break time:** 0  
**Group Marks:** 500  
**Is this Group for Examiner?:** No

## Other Subjects

**Section Id :** 405036119  
**Section Number :** 1  
**Section type :** Online  
**Mandatory or Optional:** Mandatory  
**Number of Questions:** 11  
**Number of Questions to be attempted:** 11  
**Section Marks:** 44

**Sub-Section Number:** 1  
**Sub-Section Id:** 405036203  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Id : 4050363035 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 4 Wrong Marks : 1**

Following statement is more accurate with respect to limitations of Arrhenius relationship for stability prediction :

Options :

- Less relative humidity and oxygen solubility at higher temperature

- Same degradation mechanisms may predominate at different temperatures
- Equal moisture concentrations will be mentioned at different temperatures
- Order of degradation will alter at higher temperature

Question Number : 2 Question Id : 4050363036 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Type II glass containers are :

Options :

- Most inert glasses and shows high hydrolytic resistance
- Suitable for most acidic and neutral aqueous preparations
- Suitable for alkaline solutions
- Suitable for non-aqueous preparations

Question Number : 3 Question Id : 4050363037 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Lakes of Dyes available commercially contain maximum upto \_\_\_\_\_ of pure dye.

Options :

- 25%
- 15%
- 50%

- 10%

Question Number : 4 Question Id : 4050363038 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

An excipient Ludipress used for liquid Dosage form is a coprocessed excipient of :

Options :

- Lactose monohydrate + Kollidon 30 + Kollidon CL
- Lactose monohydrate + Kollidon 30
- Dextrose monohydrate + Kollidon 30 + Kollidon CL
- Dextrose monohydrate + Kollidon 30

Question Number : 5 Question Id : 4050363039 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

As per European Pharmacopoeia technical guide, substance stored at 25°C for 24 hours at 80% RH, called very hygroscopic when increase in weight is :

Options :

- $\geq 0.2\% \text{ w/w}$  and  $< 15\% \text{ w/w}$
- $\geq 0.2\% \text{ w/w}$  and  $< 20\% \text{ w/w}$
- $\geq 0.2\% \text{ w/w}$  and  $< 2\% \text{ w/w}$
- $\geq 15\% \text{ w/w}$

Question Number : 6 Question Id : 4050363040 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Violin gut is obtained from intestine of :

Options :

- Horse
- Sheep
- Cat
- Camel

Question Number : 7 Question Id : 4050363041 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In capsule making the Bloom strength of gelatin is proportional to molecular weight of the gelatin and is a measure of the;

Options :

- Adhesive strength of gelatin with other polymer
- Adhesive strength of gelatin with dipping pins
- Cohesive strength of the crosslinking that occurs between gelatin molecules
- Cohesive strength of the solvent molecules

Question Number : 8 Question Id : 4050363042 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

SCHICK Test Toxin is a sterile Filterate from a culture of :

Options :

- *Mycobacterium Diphtheriae*
- *Actinobacillus mallei*

● *Coryne bacterium Diphtheriae*

● *Rickettsia prowazeki*

Question Number : 9 Question Id : 4050363043 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Relative sweetness of sucrose, to saccharin :

Options :

● 1 : 100

● 1 : 200

● 1 : 500

● 1 : 400

Question Number : 10 Question Id : 4050363044 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Pyrogens present in containers can be destroyed by heating the containers at :

Options :

● 121°C for 15 mins

● 121°C for 30 mins

● 210°C for 1 h

● 210°C for 4 h

Question Number : 11 Question Id : 4050363045 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Dimethyl sulfoxide acts as penetration enhancer for topical formulations by :

Options :

- Denaturing proteins
- Altering solvent nature of membrane
- Increasing solubility
- Increasing transepidermal loss

## Pharmaceutical Chemistry

Section Id :	405036120
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	38
Number of Questions to be attempted:	38
Section Marks:	152

Sub-Section Number:	1
Sub-Section Id:	405036204
Question Shuffling Allowed :	Yes

Question Number : 12 Question Id : 4050363046 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The dispersion of course material by shearing in a narrow gap between a static cone and a rapidly rotating cone is caused by :

Options :

- Peptisation
- Ultrasonic Irradiation

- Electrical Dispersion

- Colloid Mills

Question Number : 13 Question Id : 4050363047 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In the process of Extraction, ethanol is used as a solvent for :

Options :

- Gums

- Alkaloids

- Waxes

- Sucrose

Question Number : 14 Question Id : 4050363048 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following is not a fundamental (primary) factor considered for selection of a location for the construction of pharmaceutical or chemical plant ?

Options :

- Raw materials

- Market for products

- Labor supply

- Soil

Question Number : 15 Question Id : 4050363049 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The version of GMP in India that describe requirement of factory premises for manufacture of cosmetics :

Options :

- Schedule M-I
  
  
  
  
  
  
- Schedule-M-II
  
  
  
  
  
  
- Schedule-M-III
  
  
  
  
  
  
- Schedule-M

Question Number : 16 Question Id : 4050363050 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

While studying solid state physicochemical properties, the packing property of drug include :

Options :

- Solubility
  
  
  
  
  
  
- Entropy
  
  
  
  
  
  
- Heat capacity
  
  
  
  
  
  
- Refractive index

Question Number : 17 Question Id : 4050363051 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Drug products that contain the same therapeutic moiety but as different salts, esters or complexes are called as :

Options :

- Therapeutic alternatives



- Therapeutic equivalents
- Pharmaceutical alternative
- Pharmaceutical equivalents

Question Number : 18 Question Id : 4050363052 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The drug concentration between Minimum effective concentration (MEC) and maximum safe concentration (MSC) is called :

Options :

- Therapeutic index
- Therapeutic range
- Toxic range
- Therapeutic ratio

Question Number : 19 Question Id : 4050363053 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The complexation of Quinine with hexyl salicylate is an example of absorption by :

Options :

- Facilitated transport
- Convective transport
- Ion pair transport

- Penocytosis

Question Number : 20 Question Id : 4050363054 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Fraction of administered dose (which may be -n form of an ester of salt) of active drug is termed as :

Options :

- Intrinsic factor
- Formulation factor
- Salt factor
- Activity factor

Question Number : 21 Question Id : 4050363055 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following will result in very closest value to the Glomerular Filtration Rate (GFR) ?

Options :

- Creatinine Clearance
- Insulin Clearance
- Albumin Clearance
- Measure of Blood Urea Nitrogen (BUN)

Question Number : 22 Question Id : 4050363056 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Method of Study Drug Distribution pattern is :

Options :

- Nuclear magnetic resonance
- UV-visible spectrophotometry
- Mass spectrophotometry
- Flourimetry

Question Number : 23 Question Id : 4050363057 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Human Serum Albumin has a molecular weight of :

Options :

- 34,000
- 59,000
- 44,000
- 65,000

Question Number : 24 Question Id : 4050363058 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The unequal attractive forces acting on the molecules at the surface of liquid gas interface when compared with molecular forces in the bulk of the liquid is due to :

Options :

- Less adhesive force of attraction
- Less cohesive force of attraction

- Absence of adhesive force of attraction

- Absence of cohesive force of attraction

Question Number : 25 Question Id : 4050363059 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The temperature dependence and the theory of viscosity is expressed by the following :

Options :

- Arrhenius equation of chemical kinetics

- Gibb's equation

- Stern-Volmer equation

- Higuchi equation

Question Number : 26 Question Id : 4050363060 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

When a solid forms a gel more readily when gently shaken or otherwise sheared than when allowed to form the gel while the material is kept at rest, the phenomenon is known as :

Options :

- Thixotropy

- Antithixotropy

- Rheopexy

- Negative rheopexy

Question Number : 27 Question Id : 4050363061 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

When the concentration of an aqueous sodium chloride solution has the same colligative properties as the solution in question, the value so obtained is known as :

Options :

- Isotonicity value
- Molarity
- Molality
- Normality

Question Number : 28 Question Id : 4050363062 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The polymorphs exhibit the following different properties Except :

Options :

- Melting points
- X-ray crystal and diffraction patterns
- Solubilities
- Chemical structures

Question Number : 29 Question Id : 4050363063 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Centistoke is the CGS unit for the following property :

Options :

- Surface tension

- Fluidity
- Kinematic viscosity
- Coefficient of viscosity

Question Number : 30 Question Id : 4050363064 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which of the following powder shows the greatest degree of dustibility ?

Options :

- Fine charcoal
- Potato Starch
- Talcum powder
- Lycopodium powder

Question Number : 31 Question Id : 4050363065 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The 'Crenulation' effect on the cell wall is caused by \_\_\_\_\_ solutions and this effect is \_\_\_\_\_.

Options :

- Hypertonic; reversible
- Hypertonic; irreversible
- Hypotonic; reversible

- Hypotonic; irreversible

Question Number : 32 Question Id : 4050363066 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

When six suppositories containing 20 percent of morphine hydrochloride in Theobroma oil are to be prepared, which of the following statement is correct ?

(Given : Displacement value of morphine hydrochloride is 1.5; weight of each suppository is 1g)

Options :

- The displacement value of morphine hydrochloride is to be considered
- The displacement value of morphine hydrochloride is to be ignored
- The displacement value of Theobroma oil is to be considered
- The displacement values of both morphine hydrochloride and Theobroma oil are to be considered

Question Number : 33 Question Id : 4050363067 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Increasing the proportion of the disperse phase of an emulsion by more than 60% may lead to :

Options :

- Cracking
- Phase inversion
- Creaming
- Frothing

Question Number : 34 Question Id : 4050363068 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Burow's solution is :

Options :

- Aluminium acetate solution strong
- Ammonium acetate solution strong
- Calcium hydroxide solution strong
- Calcium phosphate solution strong

Question Number : 35 Question Id : 4050363069 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The Acidic polymers of Ribitol/Glycerol phosphate present in Gram positive microorganism are known as :

Options :

- Teichoic acids
- Polysaccharides
- Lysozymes
- Peptidoglycans

Question Number : 36 Question Id : 4050363070 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Production of Acetyl methyl carbinol can be detected by which of the following test ?

Options :

- Citrate utilization test



- Voges-proskaver test

- Methyl red test

- Indole test

Question Number : 37 Question Id : 4050363071 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

This fungus is also known as opportunistic pathogen, often isolated from warm-blooded animals.

Options :

- *Penicillium notatum*

- *Penicillium chrysogenum*

- *Aspergillus niger*

- *Candida albicans*

Question Number : 38 Question Id : 4050363072 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The following gram positive bacteria species is positive for the coagulase test (a test for the ability of bacteria to cause blood plasma to clot).

Options :

- *S. aureus*

- *S. epidermidis*

- *S. saprophyticus*

- S. lactis

Question Number : 39 Question Id : 4050363073 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

According to distribution law, select the appropriate expression for the concentration of a solute when it exist as monomer in solvent A and dimer in solvent B

(Assume  $C_A$  = concentration of solute in solvent A

$C_B$  = concentration of solute in solvent B

$\alpha$  = degree of dissociation)

Options :

- $$K = \frac{C_A}{2 \times \sqrt{C_B}}$$

- $$K = \frac{C_A}{\sqrt{C_B}}$$

- $$K = \frac{C_A}{C_B(1 - \alpha)}$$

- $$K = \frac{C_A}{C_B(2 - \alpha)}$$

Question Number : 40 Question Id : 4050363074 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Choose the wrong statement from the following with regard to Amorphous solids :

Options :

- They tend to flow when subjected to sufficient pressure
- They do not have definite melting point
- Usually they are anisotropic

- Considered as super cooled fluids

Question Number : 41 Question Id : 4050363075 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The second law of thermodynamics states that 'whenever a spontaneous process takes place, it is accompanied by an increase in the total energy of the universe.' The equation that satisfies the above law is :

Options :

- $\Delta S_{\text{universe}} = S_{\text{system}} - \Delta S_{\text{surrounding}}$
- $\Delta S_{\text{universe}} = S_{\text{surrounding}} - \Delta S_{\text{system}}$
- $S_{\text{system}} = \Delta S_{\text{universe}} + \Delta S_{\text{surrounding}}$
- $\Delta S_{\text{universe}} = S_{\text{system}} + \Delta S_{\text{surrounding}}$

Question Number : 42 Question Id : 4050363076 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

When adhesive attractions between molecules of different species exceeds cohesive attraction between like molecules, the deviation according to Rault's law is said to be :

Options :

- Partial
- Negative
- Positive
- Neutral

Question Number : 43 Question Id : 4050363077 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Molar heat capacity of a system is defined as :

Options :

- The amount of heat required to raise temperature of one mole of the system by one Kelvin
- The amount of heat required to decrease temperature of one mole of the system by one Kelvin
- The amount of heat required to raise temperature of one mole of the system by one Fahrenheit
- The amount of heat required to decrease temperature of one mole of the system by one Fahrenheit

Question Number : 44 Question Id : 4050363078 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following is the example of "Invert Sugar" ?

Options :

- Lactose
- Sucrose
- Lactulose
- Sucralose

Question Number : 45 Question Id : 4050363079 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Following amino acid does not exhibit optical isomerism :

Options :

- Alanine

- Leucine
- Serine
- Glycine

Question Number : 46 Question Id : 4050363080 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Riboflavin, chemically is :

Options :

- 6,7-dimethyl isoalloxazine
- 8,9-dimethyl isoalloxazine
- 6,7-diethyl isoalloxazine
- 8,9-diethyl isoalloxazine

Question Number : 47 Question Id : 4050363081 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

If two monosaccharides differ in their structure around a single carbon atom, they are called as

\_\_\_\_\_.

Options :

- Dimers
- Epimers
- Trimers

- Trioses

Question Number : 48 Question Id : 4050363082 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Following is the important sterol in faeces formed from cholesterol by bacteria in lower intestine :

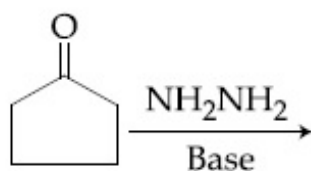
Options :

- 7-Dehydrocholesterol
- 7- $\alpha$ -Hydroxy cholesterol
- Coprostanol
- Lithocholic acid

Question Number : 49 Question Id : 4050363083 Question Type : MCQ Option Shuffling : Yes

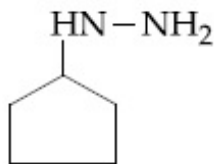
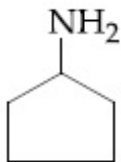
Correct Marks : 4 Wrong Marks : 1

Product of the following reaction :



Options :

- 
-



## Pharmaceutics

Section Id :	405036121
Section Number :	3
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	38
Number of Questions to be attempted:	38
Section Marks:	152

Sub-Section Number:	1
Sub-Section Id:	405036205
Question Shuffling Allowed :	Yes

Question Number : 50 Question Id : 4050363084 Question Type : MCQ Option Shuffling : Yes  
 Correct Marks : 4 Wrong Marks : 1

An aldopentose can be converted into aldohexose by :

Options :

- Kiliani-Fischer synthesis
- Wohl's method
- Ruff's degradation method
- Hoffmann degradation method

Question Number : 51 Question Id : 4050363085 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Electron releasing groups stabilizes free radicals by :

Options :

- Positive mesomeric (+m) effect
- Negative mesomeric (-m) effect
- Positive inductive (+I) effect
- Negative inductive (-I) effect

Question Number : 52 Question Id : 4050363086 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Propanone and 2-hydroxy propene are ;

Options :

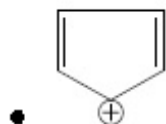
- Chain Isomers
- Rotamers
- Tautomers
- Position isomers

Question Number : 53 Question Id : 4050363087 Question Type : MCQ Option Shuffling : Yes

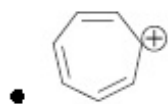
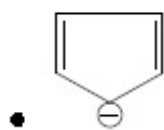
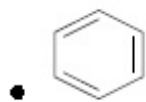
Correct Marks : 4 Wrong Marks : 1

Which of the following is Anti aromatic ?

Options :







Question Number : 54 Question Id : 4050363088 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Walden inversion or complete reversal of stereochemistry occurs in one of the following substitution reaction :

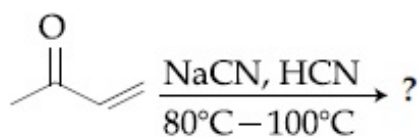
Options :

- $\text{SN}_2$  reactions
- $\text{SN}_1$  reactions
- $\text{SN}_{\text{Ar}}$  reactions
- $\text{SN}_{\text{i}}$  reaction

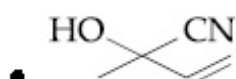
Question Number : 55 Question Id : 4050363089 Question Type : MCQ Option Shuffling : Yes

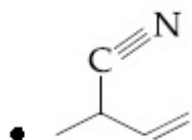
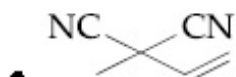
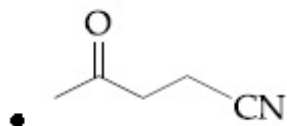
Correct Marks : 4 Wrong Marks : 1

What is the product of the following reaction ?



Options :





Question Number : 56 Question Id : 4050363090 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following rearrangement involves migration of a group from carbon to electron deficient nitrogen ?

Options :

- Baeyer villiger, rearrangement
- Pinacol-pinacolone rearrangement
- Beckmann rearrangement
- Wilgerodt rearrangement

Question Number : 57 Question Id : 4050363091 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The condensation of an active methylene compound with formaldehyde and an amine to form  $\beta$ -amino carbonyl compound is known as :

Options :

- Beckmann rearrangement

- Stobbe condensation
- Mannich reaction
- Knoevenagel condensation

Question Number : 58 Question Id : 4050363092 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The Nitration of quinoline gives a mixture of \_\_\_\_\_.

Options :

- 2-nitro-and 4-nitroquinolines
- 5-nitro-and 8-nitroquinolines
- 3-nitro-and 6-nitroquinolines
- 2-nitro-and 7-nitroquinolines

Question Number : 59 Question Id : 4050363093 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which of the following groups stabilizes carbocation in electrophilic aromatic substitution ?

Options :

- $-\text{N}(\text{CH}_3)_3^+$ ,  $-\text{NO}_2$
- $-\text{CN}$ ,  $-\text{SO}_3\text{H}$
- $-\text{COOH}$ ,  $-\text{CHO}$

- $-\text{NH}_2, -\text{OH}$

Question Number : 60 Question Id : 4050363094 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The specific reagents used in skraup synthesis of quinoline are :

Options :

- Glycerol, aniline, sulfuric acid and Nitrobenzene
- Benzaldehyde, aniline, sulfuric acid and Nitrobenzene
- Benzaldehyde, Acetal of aminoethanal and Nitrobenzene
- Glycerol, Acetal of aminoethanal and Nitrobenzene

Question Number : 61 Question Id : 4050363095 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The heterocyclic nucleus present in nitrofurantoin are :

Options :

- 2-nitro furan and imidazole 2,4-dione
- 3-nitro furan and imidazole 2,4-dione
- 2-nitro furan and imidazoline-2-one
- Furan and pyrrole

Question Number : 62 Question Id : 4050363096 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Antifungal agent 5-fluorocytosine is converted to its active metabolite 5-fluorouracil by one of the following fungal enzyme :

Options :

- Cytosine reductase
- Cytosine deaminase
- Cytosine demethylase
- Cytosine deacetylase

Question Number : 63 Question Id : 4050363097 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which one is NOT an opioid receptor ?

Options :

- Mu
- Kappa
- Delta
- Gamma

Question Number : 64 Question Id : 4050363098 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The mechanism by which fluorides inhibit dental caries is :

Options :

- Decreased acid solubility of enamel
- By increasing the sensitivity of tooth enamel
- By increasing susceptibility to acid

- Increased acid solubility of enamel

Question Number : 65 Question Id : 4050363099 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

This 4-amino quinoline antimalarial drug marketed as R, S isomer, has two trifluoromethyl moieties at position 2' and 8' and no electronegative substituent either at 6' or 7' positions is :

Options :

- Chloroquine
- Mefloquine
- Amodiaquine
- Primaquine

Question Number : 66 Question Id : 4050363100 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Mitomycin C is an antibiotic isolated from :

Options :

- *Streptomyces peucetius*
- *Streptomyces caespitosus*
- *Streptomyces verticillus*
- *Streptomyces antibioticus*

Question Number : 67 Question Id : 4050363101 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The weakly acidic nature of warfarin is attributed to the presence of :

Options :

- Methylene protons on substitution at 3<sup>rd</sup> position
- Aromatic protons of coumarin ring
- Proton of hydroxyl group at 4<sup>th</sup> position
- Proton on chiral carbon

Question Number : 68 Question Id : 4050363102 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

One of the following statement with respect to carbachol is NOT correct Identify :

Options :

- The amino group decreases electrophilicity of the carbonyl group
- It possess both muscarinic and nicotinic action
- It can be administered orally
- It is more susceptible to hydrolysis as compared to acetylcholine

Question Number : 69 Question Id : 4050363103 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Closeness of a measured value to the true or accepted value is known as \_\_\_\_\_.

Options :

- Precision
- Accuracy

- Deviation

- Bias

Question Number : 70 Question Id : 4050363104 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The principle of liquid-liquid extraction is \_\_\_\_\_.

Options :

- Partition

- Solubility

- Adsorption

- Separation

Question Number : 71 Question Id : 4050363105 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The principle of gas-liquid chromatography is \_\_\_\_\_.

Options :

- Affinity chromatography

- Partition chromatography

- Adsorption chromatography

- Ion exchange chromatography

Question Number : 72 Question Id : 4050363106 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1



Hydrated proton is called \_\_\_\_\_.

Options :

- Water proton
- Proton pump
- Hydronium ion
- Roxonium ion

Question Number : 73 Question Id : 4050363107 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

The solvent used in NMR spectroscopy with the highest level of deuteration among these is :

Options :

- Deuteriochloroform
- Deuteriomethanol
- Deuterioacetone
- Deuterium oxide

Question Number : 74 Question Id : 4050363108 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Globar source in infra red spectrophotometer is \_\_\_\_\_.

Options :

- Nichrome wire
- Silicon carbide rod

- Rhodium wire heated in ceramic

- Tungsten filament

Question Number : 75 Question Id : 4050363109 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

When an electron with charge  $1.60 \times 10^{-19}$  coulombs is moved through a potential difference of 1 volt, the energy expended or released is called as \_\_\_\_\_.

Options :

- 1 joule

- 1 coulomb

- 1 e volt

- 1 erg

Question Number : 76 Question Id : 4050363110 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

What is the approximate chemical shift ranges for protons attached to aldehydic groups ?

Options :

- 9.5 - 10.0  $\delta$

- 4 - 8  $\delta$

- 6 - 7.9  $\delta$

- 1.5 - 3.5  $\delta$

Question Number : 77 Question Id : 4050363111 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Two pore domain  $K^+$  ions channels are opened by which one of the following categories of anaesthetics ?

Options :

- Barbiturates
  
  
- Halogenated inhalation anaesthetic
  
  
- Opioid analgesics
  
  
- Benzodiazepines

Question Number : 78 Question Id : 4050363112 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which three of the following are physiological effects of ganglionic stimulating agents ?

- (A) Stimulation of sympathetic ganglia and the adrenal medulla leading to cardiovascular responses
- (B) Initial transient stimulation and then a more persistent depression of all autonomic ganglia
- (C) Marked depression of CNS leading to analgesia.
- (D) Chronic exposure causes a marked increase in the density of nicotinic receptors contributing tolerance and dependence.
- (E) Combined activation of parasympathetic ganglia and cholinergic nerve ending by nicotine results in increased tone and motor activity of the bowel.
- (F) Inhibition of salivary and bronchial secretions that is followed by stimulation.

Options :

- (A); (C) and (D)
  
  
- (B); (D) and (F)
  
  
- (B); (C) and (E)
  
  
- (A); (B) and (D)

Question Number : 79 Question Id : 4050363113 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Ion trapping is an important process in drug distribution with potential therapeutic benefit. It is defined as :

Options :

- An acidic drug will accumulate on the more basic side of the membrane and a basic drug on more acidic side.
- An acidic drug will accumulate on the more acidic side of the membrane and a basic drug on more basic side.
- An acidic drug will accumulate on the more acidic side of the membrane and a basic drug on more acidic side.
- An acidic drug will accumulate on the more basic side of the membrane and a basic drug on more basic side.

Question Number : 80 Question Id : 4050363114 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following is not one of the triade effects of adrenaline leading to rise in blood pressure ?

Options :

- Stimulation of presynaptic alpha-2 adrenoreceptor leading to increase sympathetic tone
- An increased heart rate (positive chronotropic action)
- A direct myocardial stimulation that increases the strength of ventricular contraction
- Vasoconstriction in many vascular bed specially in precapillary resistance vessels of skin

Question Number : 81 Question Id : 4050363115 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Identify the diuretic which causes hyperuricaemia, tend to raise serum calcium and also causes magnesium depletion ?

Options :

- Mannitol
- Chlorthiazide
- Acetazolamide
- Furosemide

Question Number : 82 Question Id : 4050363116 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Cotrimoxazole is combination of trimethoprim with sulfamethoxazole. Which of the following statement is correct about cotrimoxazole ?

Options :

- Most effective ratio of trimethoprim : sulfamethoxazole in plasma is 20 : 1.

Trimethoprim : sulfamethoxazole are administered in a dose ratio of 5 : 1 to achieve optimal synergistic effect.

- Cotrimoxazole is contraindicated during pregnancy.
- Cotrimoxazole is ineffective in treating respiratory tract infections.

Question Number : 83 Question Id : 4050363117 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following drugs possesses Antiplatelet effects ?

Options :

- Urokinase

- Clopidogrel
- Desmopressin
- Erythropoietin

Question Number : 84 Question Id : 4050363118 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which one of the following is not the property of osmotic diuretics ?

Options :

- Freely filtered at the glomerulus
- Undergo limited reabsorption by the renal tubule
- Are relatively inert pharmacologically
- They inhibit carbonic anhydrase

Question Number : 85 Question Id : 4050363119 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The mechanism of antiepileptic effect of Lamotrigine is by :

Options :

- Blockade of NMDA receptors
- Inhibition of glutamate release
- Inhibition of Na<sup>+</sup> channels

- Inhibition of  $\text{Ca}^{++}$  channels

Question Number : 86 Question Id : 4050363120 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

d-tubercularin produces skeletal muscle relaxation by inhibiting :

Options :

- Ganglionic nicotinic receptors
- Muscurinic receptors
- $\alpha$ -adrenergic receptors
- Nicotinic receptors in neuromuscular junction

Question Number : 87 Question Id : 4050363121 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Meloxicam belongs to which class of Nonsteroidal Anti-inflammatory Drugs (NSAIDs) ?

Options :

- Selective cox-1 inhibitor
- Preferential cox-2 inhibitor
- Selective cox-2 inhibitor
- Preferential cox-1 inhibitor

## Pharmacognosy

Section Id :

405036122

Section Number :

4

Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	10
Number of Questions to be attempted:	10
Section Marks:	40

Sub-Section Number:	1
Sub-Section Id:	405036206
Question Shuffling Allowed :	Yes

Question Number : 88 Question Id : 4050363122 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Following pairs represent antibiotic and its source. Identify the correct pair :

Options :

- Griseofulvin : Bacteria
- Colistin : Fungi
- Polyenes : Fungi
- Macrolides : Actinomycetes

Question Number : 89 Question Id : 4050363123 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which one of the following statement is true for cancer cells ?

Options :

- Cancer cells produce oncoproteins in the absence of growth factors or external stimuli
- Cancer cells require stimulation by growth factors
- Oncoproteins produced by cancer cells act on neighboring cells
- Cancer cells are highly sensitive to growth inhibitory signals



Question Number : 90 Question Id : 4050363124 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which one of the following is a organ specific (localised) autoimmune disease ?

Options :

- Rheumatoid arthritis
  
  
- Grave's disease
  
  
- Scleroderma
  
  
- Polyarteritis nodosa

Question Number : 91 Question Id : 4050363125 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

One of the following is not a chemical or histochemical change that occurs in infarction of heart :

Options :

- Glycogen depletion
  
  
- Increase in lactic acid
  
  
- Decrease in sodium
  
  
- Influx of calcium

Question Number : 92 Question Id : 4050363126 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which one of the following is not the biochemical marker of all death ?

Options :

- Creatine kinase

- Lipase
- Amylase
- Phospholipase

Question Number : 93 Question Id : 4050363127 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In the transplant rejection the clinical features of graft-versus-host reaction includes following-  
Except :

Options :

- Fever, weight loss
- Rheumatoid arthritis
- Intestinal malabsorption
- Dermatitis, diarrhoea

Question Number : 94 Question Id : 4050363128 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In one of the following situations metabolic acidosis does not occur :

Options :

- Production of less amount of lactic acid
- Uncontrolled diabetes mellitus
- Chronic renal failure

- Therapeutic administration of acetazolamide

Question Number : 95 Question Id : 4050363129 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Rosacea is a skin condition that affect :

Options :

- Teenage people
- Adults between the age of 30 - 60
- Oldage people
- Only woman

Question Number : 96 Question Id : 4050363130 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which of the following Neurotransmitter is formed on demand and act immediately ?

Options :

- Nitric oxide (NO)
- Adrenaline
- Histamine
- Acetylcholine

Question Number : 97 Question Id : 4050363131 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

A typical long bone consists of following parts except :

Options :

- The diaphysis
- The epiphyses
- The periosteum
- The trabeculae

## Pharmacology

<b>Section Id :</b>	405036123
<b>Section Number :</b>	5
<b>Section type :</b>	Online
<b>Mandatory or Optional:</b>	Mandatory
<b>Number of Questions:</b>	28
<b>Number of Questions to be attempted:</b>	28
<b>Section Marks:</b>	112

<b>Sub-Section Number:</b>	1
<b>Sub-Section Id:</b>	405036207
<b>Question Shuffling Allowed :</b>	Yes

Question Number : 98 Question Id : 4050363132 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Autorhythmicity is present in which of the following group of tissues ?

Options :

- Skeletal muscle and cardiac muscle
- Cardiac muscle and visceral smooth muscle
- Skeletal muscle and visceral smooth muscle
- Cardiac muscle and neuronal tissue

Question Number : 99 Question Id : 4050363133 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Mechanical digestion in mouth in which food is mixed with saliva is \_\_\_\_\_ and the movement of food from mouth into the stomach is \_\_\_\_\_.

Options :

- Deglutition; propulsion
  
  
- Mastication; deglutition
  
  
- Segmentation; mastication
  
  
- Segmentation; propulsion

Question Number : 100 Question Id : 4050363134 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Except one of the following pairs represent drugs used in the treatment of glaucoma and their primary mechanism. Select the wrong pair from the following :

Options :

- Topical miotics : Increase aqueous outflow
  
  
- Topical beta-adrenergic blockers : Decrease aqueous outflow
  
  
- Topical carbonic anhydrase inhibitors : Decrease aqueous formation
  
  
- Topical prostaglandin analogues : Increase aqueous outflow

Question Number : 101 Question Id : 4050363135 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which one of the following is not a renal osteodystrophy (type of bone disease associated with chronic kidney disease) ?

Options :

- Secondary hypoparathyroidism

- Osteomalacia

- Mixed renal osteodystrophy

- Adynamic bone disease

Question Number : 102 Question Id : 4050363136 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Identify antiarrhythmic drug that increases duration of QT wave and decreases the sinus rate, whereas it has no effect on QRS complex :

Options :

- Amiodarone

- Verapamil

- Lidocaine

- Quinidine

Question Number : 103 Question Id : 4050363137 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Identify phase of clinical trial having following features :

(A) Trial is conducted on about 3000 patients

(B) Purpose of trial is therapeutic confirmation

(C) Safety and tolerability is evaluated on wider scale

(D) Completion of trial is followed by New Drug Application (NDA)

Options :

- Phase - I

- Phase - II
- Phase - III
- Phase - IV

Question Number : 104 Question Id : 4050363138 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Which one of the following is not affected in respiratory tuberculosis ?

Options :

- Pleural cavity
- Mediastinal lymph nodes
- Larynx
- Pericardium

Question Number : 105 Question Id : 4050363139 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The fundamental principle "Law of similia" falls under which therapy ?

Options :

- Ayurveda
- Aroma therapy
- Homoeopathy
- Siddha

Question Number : 106 Question Id : 4050363140 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Nicotine from tobacco is an alkaloid which is :

Options :

- Crystalline
- Semisolid
- Oxygen free liquid
- Oxygen free solid

Question Number : 107 Question Id : 4050363141 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In shikimic acid pathway, chorismate mutase converts chorismic acid to :

Options :

- Gutta
- Carotenoids
- Phytol
- Prephenate (Prephenic acid)

Question Number : 108 Question Id : 4050363142 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In colour test for alkaloids colchicine with mineral acids gives :

Options :

- Violet colour



- Red colour
- Blue colour
- Yellow colour

Question Number : 109 Question Id : 4050363143 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The major property of Ayurvedic herbs, "Rasa" indicates :

Options :

- Taste
- Physicochemical properties
- Potency
- Post digestive effect

Question Number : 110 Question Id : 4050363144 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

A fixed oil when added to an equal volume of ethanol; clear liquid is obtained; on cooling at 0°C and on storage for three hours, the liquid remains clear such fixed oil is identified as :

Options :

- Neem oil
- Evening Primrose oil
- Soyabean oil

- Castor oil

Question Number : 111 Question Id : 4050363145 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Plants which are not differentiated into root, stem and leaves are :

Options :

- Thallophyte
- Plant aginales
- Bromeliales
- Principes

Question Number : 112 Question Id : 4050363146 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In Aloe the mucilage containing parenchymatous cells are present in :

Options :

- Epidermis
- Central parenchymatous region
- Vascular bundles
- Pericyclic cells

Question Number : 113 Question Id : 4050363147 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Dragendorff's reagent is :

Options :

- Potassium bismuth iodide
- Potassium mercuric iodide
- Potassium picrate
- Potassium iodate

Question Number : 114 Question Id : 4050363148 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

In yarn, the presence of, irregular arrangement of the fibres, the ends of which often project from the surface is because of :

Options :

- Absence of combing
- Improper drying
- Absence of linters
- Presence of impurities

Question Number : 115 Question Id : 4050363149 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

As per the definition of D & C Act, Gudakhu (rubbed against human teeth) is considered as :

Options :

- Drug
- Cosmetic

- Food
- Sweetening gum

Question Number : 116 Question Id : 4050363150 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

As per the Drugs and Cosmetics Act-1940, if a drug is not labelled in prescribed manner it is a :

Options :

- Misbranded drug
- Adulterated drug
- Spurious drug
- Substandard drug

Question Number : 117 Question Id : 4050363151 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

Standards to be complied under D & C act - 1940 for drugs imported, manufactured, stocked and exhibited for sale or distribution are covered under :

Options :

- Schedule L
- Schedule M
- First Schedule
- Second Schedule

Question Number : 118 Question Id : 4050363152 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Who was the Chairman of the Drugs Enquiry Committee which was established in the year 1927 ?

Options :

- R.N. Chopra
  
  
  
  
  
  
  
  
  
  
- B. Mukherjee
  
  
  
  
  
  
  
  
  
  
- Joseph Bhore
  
  
  
  
  
  
  
  
  
  
- S.S. Bhatia

Question Number : 119 Question Id : 4050363153 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

Which of the following Microorganism is used for the effective synthesis of interferon ?

Options :

- *Saccharomyces Cerevisiae*
  
  
  
  
  
  
  
  
  
  
- *Bacillus Subtilus*
  
  
  
  
  
  
  
  
  
  
- *Pseudomonas Aureginosa*
  
  
  
  
  
  
  
  
  
  
- *Micrococcus Luteus*

Question Number : 120 Question Id : 4050363154 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 4 Wrong Marks : 1

During the denaturation cycle in polymerase chain reaction the temperature is raised to :

Options :

- 90 - 98°C

- 80 - 88°C
- 70 - 78°C
- 60 - 68°C

Question Number : 121 Question Id : 4050363155 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The Crystal form of Sulphacetamide is :

Options :

- Orthorhombic
- Triclinic
- Rhombohedral
- Monoclinic

Question Number : 122 Question Id : 4050363156 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

The general purpose sodalime glass is not a suitable material for fabricating the container for :

Options :

- Parenterals
- Dry powders
- Liquids for external use

- Oral solutions

Question Number : 123 Question Id : 4050363157 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In solid-solid mixing, large scale continuous type of mixer is :

Options :

- Sigma blender
- Zigzag blender
- Ribbon blender
- Twin shell blender

Question Number : 124 Question Id : 4050363158 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In International organization for standardization (ISO), standard pertaining to quality system model for quality assurance in production, installation and servicing is given under :

Options :

- ISO 9000
- ISO 9001
- ISO 9002
- ISO 9004

Question Number : 125 Question Id : 4050363159 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 4 Wrong Marks : 1

In which year India signed General Agreement on Trade and Tariffs (GATT) i  
Related Intellectual Property Rights (TRIPS) ?

Options :

- 1996

- 1994

- 1992

- 1990