

Second half 2017, Sem II [CBSCS]
Date: 20/11/17
ATKT

Q.P. Code :01221

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B:
- All the question are compulsory.
 - Figure to the right indicate full marks.
 - Draw neat, labelled diagrams wherever necessary.

Q.1 (a) Answer the following : (16)

- Give the composition & functions of CSF.
- Give the functions of nose.
- Mention the functions of aldosterone.
- What is neoplasia?
- Comment on gigantism.
- Draw a well labelled diagram of tongue.
- What is depression?
- What do you know about bronchitis?

Q.1 (b) Answer the following : (4)

- & hormones are involved in calcium homeostasis.
- Give the functional classification of neurons
- What is myopia?
- Define tidal volume.

Q.2 (a) Answer the following :

- Write a short note on **(any one)** :
 - Cellular adaptation
 - Necrosis
- Differentiate between Benign & Malignant tumors.

OR

- Explain carcinogenesis.

(b) Discuss the biological effect of **(any one)** :

- X-rays
- U.V. radiation

Q.3 (a) Answer **any two** of the following : (8)

- Discuss the neuroglia of CNS.
- Explain the functions of medulla oblongata.
- Enlist & give the functions of neurotransmitters.

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(b) Discuss the pathophysiology of **(any one)** : (4)

- i. Epilepsy
- ii. Alzheimer's disease

Q.4 (a) Answer **any two** of the following : (8)

- i. Explain the mechanism of respiration.
- ii. Describe the structure of pharynx.
- iii. Discuss the regulation of respiration.

(b) Write short note on the **any one** of the following : (4)

- i. Asthma
- ii. Bronchitis

Q.5 (a) Answer **any two** of the following : (8)

- i. Describe the physiological effects of glucocorticoids.
- ii. Discuss Renin Angiotensin Aldosterone system.
- iii. Explain the role of hormones of Adenohypophysis.

(b) Answer **any one** of the following : (4)

- i. Write a note on Thyrotoxicosis.
- ii. Differentiate between Type I & Type II Diabetes mellitus.

Q.6 (a) Answer **any two** of the following : (8)

- i. Give the composition & functions of lacrimal fluid.
- ii. Draw a well labelled diagram of skin.
- iii. What is light & dark adaptation?

(b) Answer **any one** of the following : (4)

- i. Differentiate between thoracolumbar of craniosacral outflow.
- ii. Give the role of sympathetic & parasympathetic nervous system on following organs :

- a) Eye
- b) Skin
- c) GIT
- d) Heart

Q.P. Code :02255

[Time: Three Hours]

| Marks:80]

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory.

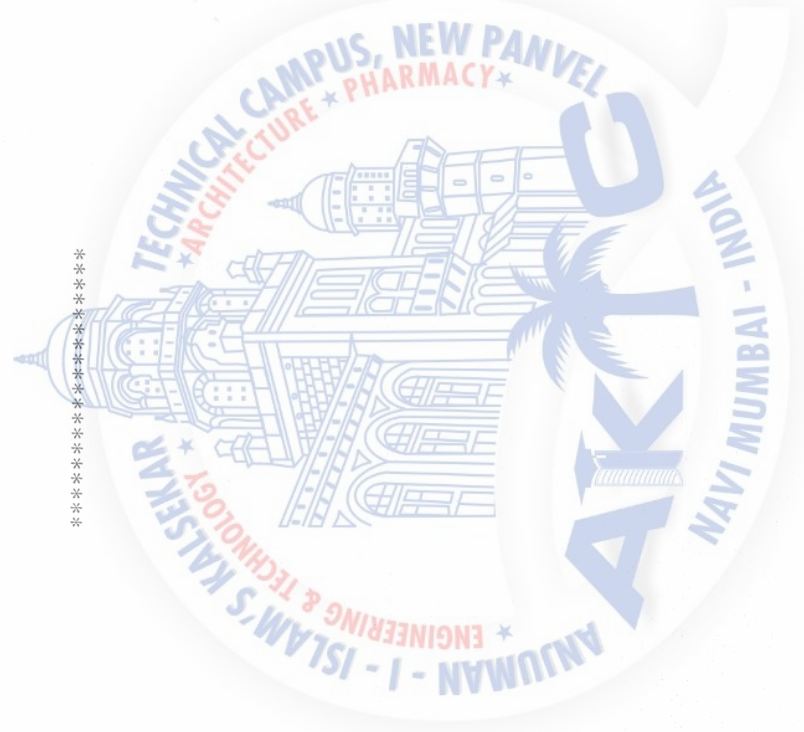
- Q.1 A. _____ number of ATP are produced when two moles of acetyl CoA are consumed in TCA cycle. 01
- B. Give two example of physiological uncouplers for ETC. 01
- C. Write complete name of branching enzyme involved in glycogenesis 01
- D. Name of drug which inhibits thymidylate synthase. 01
- E. In fatty acid biosynthesis _____ shuttle is involved. 01
- F. Name the drug which modulate uric acid synthesis 01
- G. Give names of two enzymes which are only present in glyoxalate cycle and not in TCA cycle. 02
- H. Define substrate level phosphorylation with an example 02
- I. State significance of pentose phosphate pathway. 02
- J. Draw structures of cholesterol 02
- K. Calculate the number of ATP formed in β -oxidation of linoleic acid. 02
- L. Enlist names of pathway for eicosanoid synthesis 02
- M. Enlist precursors for purine synthesis. 02
- Q.2 A Write names and structure of substrates and products for the following enzyme catalyzed reactions (any four) 08
- Glyceraldehydes dehydrogenase
 - Gluconolactone hydrolase
 - Thiokinase
 - Prostacycline synthase
 - Orotidylic acid decarboxylase
- B Give name of enzyme catalyzing the following conversion 04
- dUMP to dTMP
 - phosphoenol pyruvate to pyruvate
 - succinyl CoA succinate
 - glyoxalate to malate
- Q.3 A. Discuss series of reaction in Krebs' cycle for conversion of oxaloacetate to D-ketoglutarate 03
- B. Write the three rate limiting steps for reversal of glycolysis. 03
- C. Depicts utilization of ketone bodies as an alternatives pathway of energy. 02
- D. Give regulation for DENOVO biosynthesis of purine nucleotides 02
- E. Write reaction for biosynthesis of PGH₂ from arachidonic acid 02
- Q.4 A. Describe the biosynthesis of palmitate from malonyl ACP 03
- B. Depict schematically electron transport chain 03
- C. Explain term salvage reaction with an example 02
- D. Write reaction catalyzed by transadolase 02
- E. Give the formation of AMP from IMP 02

TURN OVER

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- Q.5
- A. Discuss the preparatory phase of glycoysis 03
 - B. Explain B-oxidation of fatty acid with odd numbers of carbon atoms 03
 - C. Discuss oxidative phosphorylation 02
 - D. Outline steps involved in conversion of fatty acyl CoA to β -hydroxyacyl CoA 02
- Q.6
- A. Discuss glycogenolysis 03
 - B. Discuss biosynthesis of OMP 03
 - C. Give reaction for rate limiting step of cholesterol biosynthesis with inhibitor drug. 02
 - D. Explain glycerol phosphate shuttle involved in transferring NADH to mitochondria 02
 - E. Give possible biosynthetic route for lecithin 02



24/11/17

Sem II (BSc), 2nd half 2017

P. Cognosy - I

Q.P. Code : 04549

[Time : 3 Hours]

[Marks : 80]

Please check whether you have got the right question paper.

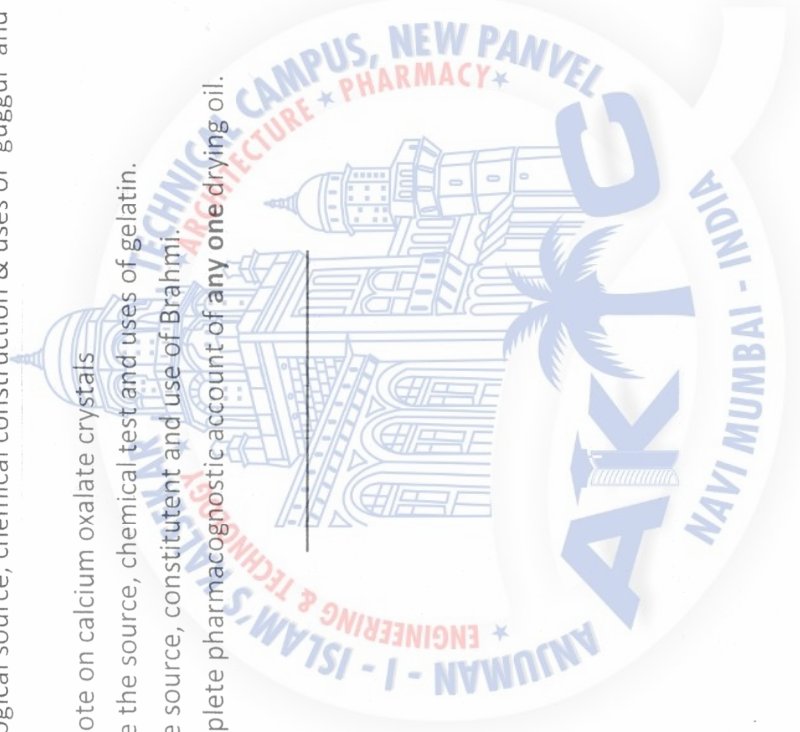
- N.B:
1. All questions are **compulsory**.
 2. **Illustrate** answers with **sketches** and **structures** wherever **required**.
 3. **Answers to sub-questions** must be **written together**.

1. (a) State true or false and justify all the statements with significant reasons or examples: 8
 - i) Gelatin is an example of mineral – origin crude drug.
 - ii) Picric acid is used for identifying endospermic tissue.
 - iii) All seeds contain conducting tissues.
 - iv) Ferric chloride test is answered positive by both flavonoids and tannins.
 - v) Coppicing method is used for the collection of flower based crude drug.
 - vi) Jute is a cellulosic fiber.
 - vii) Chitin is a pathological product.
 - viii) Ricin is used for protein digestion.
- (b) Answer the following: 12
 - i) Give merits and demerits of chemical classification of crude drug.
 - ii) Enlist two examples each of mountants and clearing agents.
 - iii) Differentiate between organized and unorganized drugs.
 - iv) Write a brief note on flavonoids.
 - v) What is polyploidy and mutation. Give suitable examples.
 - vi) Write a note on bentonite.
2. (i) Explain the status and significance of pharmacognosy in Siddha and Aromatherapy. 4
 (ii) With the help of suitable labelled diagrams, explain the salient morphological & histological features of bark-based drugs. 4
 (iii) What are Waxes? Explain source, preparation, constituents and use of Wool fat. 4
3. (i) What is inflorescence? Explain the different types of inflorescence with suitable examples. 4
 (ii) Give complete classification of saponins with suitable examples, chemical test and important biological activities. 4
 (iii) Give the pharmacognostic account of a carbohydrate drug which is commonly used as a microbiological medium. 4

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4. (i) Give one example, important biological activity and basic chemical nucleus for. 4
a) Quinine / Tropane class of alkaloids
b) Isothiocyanate / Anthraquinone class of glycosides
- (ii) Write a note on natural pest control agents. 4
- (iii) Write a note on source, preparation and uses of streptokinase and thyroid hormones. 4
5. (i) Give complete classification of carbohydrates with suitable examples. 4
- (ii) Write a note on **any two** fibers obtained from stem. 4
- (iii) Give biological source, chemical construction & uses of 'guggul' and 'chirata'. 4
6. (i) Write a note on calcium oxalate crystals 4
- (ii) a) Give the source, chemical test and uses of gelatin. 2
b) Give source, constituent and use of Brahmi. 2
- (iii) Give complete pharmacognostic account of **any one** drying oil. 4



Second half 2017

Date: 28/11/17

HPDSM

Q.P. Code :02282

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

N.B:

1. All questions are compulsory.
2. Figures to right indicate full marks.
3. Draw a neat labelled diagram wherever applicable.

- A.1 a) Classify hospitals 02
- b) Elaborate on dispensing of drug to inpatients. 02
- c) Explain suitable method used for addition and deletion of drugs from hospital formulary. 02
- d) How to prevent medication errors? 02
- e) Write a note on 'Drug utilization review.' 02
- f) State importance of sterilization of hospital supplies. 02
- g) Enlist steps involved in manufacturing of bulk compounding of LVPS. 02
- h) Define Entrepreneurship. 02
- i) State importance of purchasing policies. 02
- j) Enlist different insurance policies for drug store. 02
- Q.2 a) Discuss the 'Role of pharmacist in exercising control on ward stock items related to control substances.' 04
- b) Elaborate on adverse drug reaction monitoring. 04
- c) Enlist the conditions required to be fulfilled by Chemist & Druggist for grant of license. 04
- Q.3 a) Write a short note on safe use of drugs in hospitals. 02
- b) Elaborate on sterilization of scissors and needles. 04
- c) Explain role of windows display in sales promotion 04
- d) Define inventory control and Enlist different methods of inventory control. 02
- Q.4 a) Explain the role of hospital pharmacist in the preparation and implementation of budget for hospital pharmacy. 02

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- b) Define Hospital formulary. Give its advantages and limitations. 04
- c) Write a short note on functions of wholesaler. 04

OR

- Explain salient features of sole proprietorship 04
- d) Elaborate on role of pharmacist in prevention of frauds in retail drug store. 02
- Q.5 a) Explain 'Role of pharmacist in designing drugs distribution system for in -patients.' 02
- b) State importance of PTC. Give composition of PTC. 02
- c) Draw layout of CSSR. Comment on location and planning of CSSR. 04
- d) Discuss importance of EOQ and Reorder Quantity in Inventory Control system in drug store. 04

OR

- Explain functions of purchasing for drug store. 04
- Q.6 a) Elaborate different pharmaceutical services rendered in hospital. 04
- b) Enlist important factors to be considered for sterilization of supplies using autoclave. 02

OR

- Write a note of TPN. 02
- c) Explain services rendered by retailer to wholesaler. 02
- d) Explain advantages and disadvantages of buying an existing store. Elaborate on various registers in drug store. 04

Q.P. Code :02741

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

N.B: 1. All Question are compulsory.

2. Draw neat diagrams wherever necessary.
3. Figures to the right indicate full marks.

Q.1 a. "switching off the fans when not in use" is an example of which of 3Rs of control measures, define and justify (01)

b. Define sustainable development. (01)

c. Give two examples of reuse (01)

d. Define: Landfill (01)

e. Enlist two fossil fuels (01)

f. Enlist chemicals produced during acid rain (02)

g. Name two indoor air pollutants and their effects (02)

h. What is Blue Baby Syndrome? (02)

i. Explain the concept of Municipal Solid Waste. (02)

j. State the need of Environment Studies (02)

k) Explain secondary Air Pollutants with examples. (02)

l) Define: Carbon credits (02)

m) Explain the term "Environmental Impact Assessment" and state its objectives (02)

Q.2 a. What are the causes and methods of treatment of E-pollution (04)

OR

What are the causes and effects of water pollution.

b. Explain the constitution of Ministry of Environment and forest. Enlist their roles and duties. (04)

c. Explain the 3R system with suitable examples (04)

Q.3 a. Explain the principle of hydropower generation with suitable diagram. (04)

OR

Explain the principle and working of flash Steam plant with suitable diagram

b. Classify Municipal Solid Waste. Write a note on incineration (04)

c. Discuss the entire procedure for obtaining Environments Clearance. (04)

Q.4 a. What do you mean by Green Buildings? What are its benefits? (04)

(P.T.O)

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- b. Describe "Ganga Action Plan" (04)
- OR
- Explain "Taj Mahal" as a case study in environment legislation.
- c. Differentiate between renewable and renewable sources of energy and justify sun as a source of renewable energy. (04)

- Q.5 a. Describe Carbon Cycle with help of diagram (04)
- OR
- Describe the role of technology in Environment. (04)

- b. Write a note on techniques of disaster management with reference to earthquake.
- c. Describe the causes and effects of depleting nature of forests in the environment.

- Q.6 a. What is geothermal energy? Enlist its farms and give its applications. (04)

OR

Write a note on Ecological pyramids.

- b. Explain "Photochemical smog" causes, effects and Preventive measures. (04)
- c. Explain the principle and working of flat plate collector with diagrams. (04)

