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B.Pharma
15PH306

3rd Semester Back Examination 2019-20
ENVIRONMENTAL SCIENCE

BRANCH : B.PHARMA

Max Marks : 100

Time : 3 Hours

Q.CODE : HB810

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

- Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)**
- a) What do you mean by "RO"?
 - b) Differentiate between food chain and food web?
 - c) Distinguish between BOD and COD.
 - d) What are Coagulants? Write the name of Three.
 - e) What are non-criteria pollutants? Give Examples.
 - f) What are the waste minimization techniques?
 - g) What are biomedical wastes? Write down some examples.
 - h) Distinguish between Paralysis and Combustion.
 - i) Define 'Life cycle assessment'.
 - j) Write the name of different kind of Indian soils.

Part-II

- Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**
- a) What are the Physical and chemical factors of an Ecosystem?
 - b) Classify and explain about generation of different Hazardous wastes?
 - c) Write in short about Anaerobic digestion.
 - d) Classify the waste reduction techniques with suitable examples.
 - e) What are the benefits of a waste minimization Programme ?
 - f) Write down the Physical properties of sound?
 - g) What is MSW? Write down the collection and storage process of MSW.
 - h) Describe different methods of noise and outline various noise control Methods.
 - i) Write notes on Energy flow in an Ecosystem?
 - j) Explain about the control measures of Soil Pollution.
 - k) What are the steps to be taken for" life cycle "Assessment?
 - l) List the factors that reduce the amount of direct ran off.

Part-III

- Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)**
Discuss in detail about the aim and objective of Environmental Impact Assessment (EIA). Explain the different phases of EIA.
- Q4 (16)**
Explain about ground water contamination, its investigation and pollution prevention.
- Q5 (16)**
Define ecosystem and describe its components with suitable examples.
- Q6 (16)**
Describe the various stages involved in MSW management.

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**B.Pharma
PH.3.10**

**3rd Semester Back Examination 2019-20
ENVIRONMENTAL SCIENCE
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 70
Q.CODE : HB811**

**Answer Question No.1 which is compulsory and any FIVE from the rest.
The figures in the right hand margin indicate marks.**

- Q1 Answer the following questions : (2 x 10)**
- a) What is field Capacity?
 - b) What is Hydrological Cycle?
 - c) What are non-criteria Pollutants? Give Examples.
 - d) What is waste water treatment?
 - e) What is B.O.D?
 - f) What is Energy Budget?
 - g) What are the limitations of Ecological pyramids?
 - h) Differentiate between food chain and food web?
 - i) Define Ecology?
 - j) State the physical properties of sound?
- Q2 a) What are Criteria Pollutants? Describe about any two suitable example. (5)**
b) Explain Carbon Cycle using a neat labelled Diagram. (5)
- Q3 a) Write the different sources of water contamination. (5)**
b) Describe the different water pollution control measure? (5)
- Q4 a) Write notes on Ecological Pyramids? (5)**
b) Name the functions of Ecosystem? (5)
- Q5 a) Explain about Acid rain? (5)**
b) Describe about the causes of Ozone Depletion. (5)
- Q6 What is waste water treatment? Explain about the different steps of waste water treatment. (10)**
- Q7 What is the noise Pollution? Describe in detail about noise Criteria and Control of noise Pollution. (10)**
- Q8 Write short Notes on any TWO : (5 x 2)**
- a) Write short notes on Carbon cycle.
 - b) Write short notes on Medical hazardous wastes.
 - c) What is Global warming?
 - d) Write notes on green house effect.

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B.Pharm
15PH303

3rd Semester Back Examination 2019-20

ORGANIC CHEMISTRY-II

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB877

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

- Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)**
- a) What is Metamerism.
 - b) State the use of Aluminium tert-butoxide.
 - c) What is Specific rotation?
 - d) What is Huckel's rule of aromaticity?
 - e) State the use of Aluminium tert-butoxide.
 - f) What is Relative configuration ?
 - g) Write about Asymmetric carbon.
 - h) Write the structure of Furan & Pyrrole.
 - i) What is Internal compensation.
 - j) What is Lithium Aluminium Hydride ?

Part-II

- Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**
- a) Explain why phenol acidity of phenol.
 - b) Walden inversion.
 - c) Stereoselective and stereospecific reactions.
 - d) Friedel crafts alkylation reaction.
 - e) Discuss the preparation & Application of Diazomethane.
 - f) Explain CIP Rule.
 - g) Discuss General Method of Preparation of Phenol.
 - h) Illustrate Keto-Enol tautomerism with suitable example.
 - i) Write a short note on Geometrical Isomerism.
 - j) Explain Reimer-Tiemann Reaction?
 - k) Write a short note on N-Bromo-succinimide.
 - l) Explain Enantiomerism & Diastereoisomerism.

Part-III

- Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)**
- Discuss the general method of preparation & Reaction of indole. Describe the chemical properties of Indole.
- Q4 (16)** What is Racemic mixture? Explain the different method of Resolution of racemic mixture.
- Q5 (16)** Discuss the Preparation and chemical reactions of anthracene.
- Q6 (16)** Write the general method of preparation & Chemical reaction of Benzene.

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B.Pharm
15PH305

3rd Semester Back Examination 2019-20
PATHOPHYSIOLOGY OF COMMON DISEASES

BRANCH : B.PHARMA

Max Marks : 100

Time : 3 Hours

Q.CODE : HB748

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

- Q1** **Only Short Answer Type Questions (Answer All-10)** (2 x 10)
- a) Define adaptation.
 - b) Differentiate between acute and chronic inflammation.
 - c) What is Jaundice?
 - d) What are the signs of Inflammation?
 - e) What is the causative agent of AIDS?
 - f) What are clinical features of Gout?
 - g) Differentiate between primary and secondary hypertension.
 - h) Write about feedback system in body.
 - i) What do you mean by Homeostasis?
 - j) How do the wounds heal in body?

Part-II

- Q2** **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)** (6 x 8)
- a) Write a note on Rheumatoid arthritis
 - b) Write a note on Peptic ulcer
 - c) What are mediators of Inflammation?
 - d) Describe Anemia and role of Iron in Anemia.
 - e) Write a note on Viral hepatitis.
 - f) Write a note on Epilepsy.
 - g) Write a note on Angina pectoris and myocardial infarction.
 - h) Write a note on acute inflammation.
 - i) Write a note on Bronchial asthma.
 - j) Write a note on acute renal failure.
 - k) Write a note on Urinary tract infection.
 - l) Write a note on Tuberculosis.

Part-III

- Only Long Answer Type Questions (Answer Any Two out of Four)**
- Q3** What do you understand by STD? Write a note on their cause and clinical features of Gonorrhoea and Syphilis. (16)
- Q4** What is Congestive heart failure? Write about the etiology, pathogenesis, symptoms and complications of the disease. (16)
- Q5** Define diabetes mellitus. Write a note on its classification, causes, progression and complications of the disease. (16)
- Q6** What is cell injury? Discuss the causes of cell injury and write a note on reversible cell injury. (16)

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B.Pharma
PH.3.9

3rd Semester Back Examination 2019-20
PATHOPHYSIOLOGY OF COMMON DISEASES

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 70

Q.CODE : HB750

Answer Question No.1 which is compulsory and any FIVE from the rest.
The figures in the right hand margin indicate marks.

- Q1 Answer the following questions : (2 x 10)**
- a) What are signs of Inflammation?
 - b) Differentiate between Depression and Mania?
 - c) Write about Parkinson's disease.
 - d) Write about Bronchial asthma.
 - e) What is Thalasemia?
 - f) Write about Hemophilia.
 - g) What is acute renal failure?
 - h) What are cellular events of Inflammation?
 - i) What are cellular adaptations?
 - j) What is feedback system?
- Q2 a) Explain Congestive heart failure and write about etiology and pathogenesis. (5)**
b) Explain Myocardial infarction and write about its pathogenesis. (5)
- Q3 a) Explain Diabetes mellitus and write about its types, etiology and pathogenesis. (5)**
b) What is Rheumatoid arthritis? Write about its cause and pathogenesis. (5)
- Q4 a) Explain Viral hepatitis. Write about the types and their features. (5)**
b) Explain Anemia. Write about its causes and symptoms. (5)
- Q5 a) What is an ulcer? Write a note about Peptic ulcer. (5)**
b) Write a note on Chronic inflammation and repair. (5)
- Q6 What is cell injury? Discuss the causes of cell injury and write a note on reversible cell injury. (10)**
- Q7 Define diabetes mellitus. Write a note on its classification, causes, progression and complications of the disease. (10)**
- Q8 Write short Notes on any TWO : (5 x 2)**
- a) Classification, etiology and pathogenesis of Cancer
 - b) Atherosclerosis
 - c) STD and AIDS

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B.Pharm
15PH302

3rd Semester Back Examination 2019-20

PHARM. ENGINEERING-I

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB591

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

- Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)**
- a) Define overall heat transfer co-efficient.
 - b) Distinguish between evaporation and distillation.
 - c) What are the application of drying in pharmacy?
 - d) Define critical moisture content.
 - e) What are the advantages of size reduction?
 - f) What is filter aid? How does it function?
 - g) What do you mean by vertex? How it can be prevented.
 - h) Differentiate between macro mixing and micro mixing.
 - i) What are standard sieves?
 - j) How steam distillation process differs from simple distillation?

Part-II

- Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**
- a) Draw a neat and labelled diagram of a shell-and-tube heat exchanger and describe its construction.
 - b) Describe the rate of drying curve.
 - c) Explain the working and application of cyclone separator.
 - d) Discuss the principle, construction and uses of spray dryer.
 - e) Write a short note on planetary mixer.
 - f) Describe the principle and working of Silverson mixer emulsifier.
 - g) Write in brief the theories of size reduction.
 - h) Discuss the construction and working of tray dryer.
 - i) Explain principle and working of sieve shaker machine.
 - j) Write down the principle and application of steam distillation.
 - k) Describe the factors influencing evaporation.
 - l) Write the procedure to prepare water for injection.

Part-III

- Only Long Answer Type Questions (Answer Any Two out of Four)**
- Q3** Define Fourier's Law. Write about derivation and applications of Fourier's Law. (16)
 - Q4** Explain the principle, construction, working and use of fluidized bed dryer. (16)
 - Q5** Describe the construction, working, advantages and disadvantages of ball mill. (16)
 - Q6** Write the principle, construction, working, uses, advantages and disadvantages of plate and frame filter press. (16)

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B.Pharm
BP304T

3rd Semester Regular/Back Examination 2019-20

PHARMACEUTICAL ENGINEERING

BRANCH : B.Pharma

Max Marks: 75

Time : 3 Hours

Q.CODE : HBR749

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

Part-A

- Q1** **Only Short Answer Type Questions (Answer All-10)** **(2 x 10)**
- a) What is Reynolds Number? Show how it is dimensionless group.
 - b) Explain why the value of C_v is more than C_o in fluid flow.
 - c) Define Black Body and Grey Body.
 - d) Explain Stefan-Boltzmann law of thermal radiation.
 - e) What do you mean by economy of multiple effect evaporator ?
 - f) Why molecular distillation is also called short path distillation?
 - g) How EMC is measured?
 - h) Define convective mixing.
 - i) Write on the principle of Supercentrifuge.
 - j) Differentiate between simple distillation and fractional distillation.

Part-B

- Q2** **Only Focused-Short Answer Type Questions- (Answer Any SEVEN out of NINE)** **(7 x 5)**
- a) Describe the different laws governing size reduction.
 - b) Explain the size separation by elutriation tank.
 - c) Distinguish between Orifice Meter and Venturi Meter.
 - d) Write on the theories of corrosion.
 - e) What are the applications of centrifugation ?
 - f) Derive overall heat transfer coefficient from individual coefficients in forced convection.
 - g) Describe the advantages and disadvantages of Plate and Frame filter press.
 - h) Explain with the help of a diagram the construction and working of a ball mill.
 - i) What are the parameters which should be maintained in primary drying step i.e. sublimation of ice under vacuum in freeze drying.

Part-C

- Q3** **Only Long Answer Type Questions (Answer Any TWO out of FOUR)**
- Describe principle, construction, working, advantages and disadvantages of Silverson Mixer Emulsifier **(10)**
- Q4** Derive Bernoulli's equation and what are the application of Bernoulli's theorem. **(10)**
- Q5** Explain the factors affecting during materials selected for Pharmaceutical plant construction. **(10)**
- Q6** With a labeled sketch, explain the principle, construction, working, advantages and disadvantages of Fluidised Bed Dryer. **(10)**

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B.Pharm
BP303T

3rd Semester Regular/Back Examination 2019-20
PHARMACEUTICAL MICROBIOLOGY

BRANCH : B.Pharma

Max Marks: 75

Time : 3 Hours

Q.CODE : HRB671

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

Part-A

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- a) Differentiate prokaryotes and eukaryotes.
- b) Why for streak plate method is carried out?
- c) Write the composition of nutrient agar.
- d) Draw a suitable design for construction of aseptic area.
- e) Define preservatives with few examples.
- f) Differentiate disinfectants and antiseptics.
- g) What is germ theory of disease?
- h) Write four different factors influencing disinfectant action.
- i) What do you know about HEPA?
- j) Name four different methods for quantitative measurement of bacterial growth.

Part-B

Q2 Only Focused-Short Answer Type Questions- (Answer Any SEVEN out of NINE) (7 x 5)
Discuss briefly on the followings :

- a) Phenol coefficient test
- b) Growth pattern of bacteria with growth curve
- c) Isolation methods for pure cultures
- d) Gram's staining
- e) Animal cell culture
- f) Sterility indicators
- g) IMViC tests
- h) Replication of virus
- i) Classification of fungi

Part-C

Q3 Only Long Answer Type Questions (Answer Any TWO out of FOUR) (10)
Describe the structure of bacteria with help of a labeled diagram.

Q4 (10)
What is sterilization? Discuss in detail physical methods of sterilization.

Q5 (10)
Discuss microbial assay of antibiotics.

Q6 (10)
What do you mean by microbial spoilage? Write different sources of microbial contaminants.