

Multiple choice questions. Attempt any 12. [each 1 mark] [12]

Q.1. (1) Alternation of generation as seen in Obelia is termed as

- (a) Metameris (b) Dimorphism  
 (c) Metagenesis (c) Metamorphosis

(2) Obelia is:

- (a) Polymorphic (b) Dimorphic  
(c) Trimorphic (d) Monomorphic

(3) Nutritive zooids of Obelia is:

- (a) Hydranth (b) Gastrozooids  
(c) Trophozooid (d) all

(4) The number of tentacles of Obelia medusa is

- (a) 08 (b) 16  
(c) 32 (d) 64

(5) Primary host of Fasciola is

- (a) Man (b) Pig  
 (c) Sheep (d) Dog

(6) Miracidium is one of the stage in the development of:

- (a) Fasciola hepatica (b) Taenia solium  
(c) Ascaris (d) Planeria

(7) In Neris gamete – formation takes place in

- (a) Atoke region (b) Epitoke region  
(c) Both (d) None

(8) Respiration in Neris is done by

- (a) Gills (b) Lung  
 (c) Parapodia (d) None

(9) The maxillae are doubly grooved in the mouth parts of

- (a) Butterfly (b) House fly  
(c) Mosquito (d) Bed – bug

- (10) During hibernation or aestivation Frog lives upon  
 (a) Stored glycogen and fat (b) Stored glucose and fat  
 (c) Stored Starch and Fat (d) Stored galactose and fat
- (11) The third eye lid in frog is called:  
 (a) Pineal eye (b) Upper eyelid  
 (c) Lower eyelid  (d) Nictitating membrane
- (12) The heart of frog is  
 (a) 2 chambered (b) 3 Chambered  
 (c) 4 chambered (d) none
- (13) The urogenital duct in male frog are:  
 (a) 2 (b) 3  
 (c) 4 (d) none
- (14) The cavity of middle ear is called  
 (a) Tympanic cavity (b) Ampulla  
 (c) Endolymph (d) none
- (15) Central nervous system comprises of  
 (a) Brain and spinal cord  (b) Cranial and spinal nerve  
 (c) Sympathetic nerve And ganglia (d) All

Short answer questions. Attempt any 6. [each 2 marks][6X2=12]

- Q.2. (a) Draw diagram of sycon.  
 (b) Define polymorphism.  
 (c) Describe flame cells.  
 (d) Describe functions of canal systems.  
 (e) What is peristomium?  
 (f) List the names of sense organs present in Nereis.  
 (g) Describe economic importance of frog.  
 (h) What is pericardial fluid?  
 (i) Explain hind brain of frog.  
 (j) Explain organs of taste and touch.

Attempt any 4: —

[each 9 marks]

[36]

Q.3. Describe locomotion in protozoa

OR

Q.3. Describe habit, habitat and structure of sycon.

Q.4. Describe reproductive system of Liverfluke.

OR

Q.4 Describe life cycle of Obelia colony.

Q5. Write shortnotes on:

(a) Heteroneries and trochophore larva

05

(b) Parapodia of nereis

04

OR

Q.5. Write notes on:

(a) Piercing and sucking type mouth parts

05

(b) Siphoning type mouthparts

04

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Q.6. Describe digestive system of frog.

OR

Q6. Give an account of different modes of respiration in frog.

Q.7. Give detailed account of the structure of brain of frog

OR

Q.7. Give an account of the male urinogenital system of frog.

Best of Luck.

-x-

3/3.



DATE:22/9/2011

TIME:2:00 – 5:00

TOTAL MARKS:60

Q-1 CHOOSE THE CORRECT ANSWER (ATTEMPT ANY TWELVE) 12

- 1 H I,V is the cause of:  
(a) AIDS (b) Malaria (c)Filaria (d) Herpes
- 2 Name the bacterial disease  
(a)AIDS (b)Malaria (c) Gonorrhoea (d) Genital herpes
- 3 Factor responsible for the atherosclerosis:  
(a)Obesity (b)Rh blood group (c) Weakness (d) Viral infection
- 4 Which of the following has only one host?  
(a)E.histolytica (b)T.gambiense (c)T.solium (d) P.vivax
- 5 The main symptoms for gambien fever is  
(a)Headache (b)Dysentery(c)Diarrhoea (d)Insomnia
- 6 The water is stored in the “water cells” present in ----- stomach.  
Reticulum (b) Rumen (c)Oesophagus (d) None of these
- 7 ----- are present in birds for respiration  
(a) Air sacs (b)Brain (c)Heart (d) Kidney
- 8 ----- of burrowing animal functions as tactile organ  
(a)Tail (b) Head (c) Hand (d) none of these
- 9 Bioluminescence is feature of -----  
(a)Esturine fishes (b) Air breathing fishes (c) Deep sea fishes (d)Flying fishes
- 10 Most dangerous animals advertise themselves by -----  
(a)Dull colour (b)Teeth and claws (c) Warning colouration (d) Aggressive attitude
- 11 Echolocation ability is found in-----  
(a)Toothed whales (b)Humpback whales (c)Dolphins (d)Right whales
- 12 Ascaris is commonly called as  
(a) Pinworm (b) Round worm (c) Whip worm (d) Filarial worm
- 13 Pulmonary artery carry  
(a) Oxygenated blood to lung. (b)Deoxygenated blood to lung  
(c)Oxygenated blood to heart(d)Deoxygenated blood to heart

- 14 Anticoagulant present in normal blood is  
(a)Hirudin (b) Heparin (c) EDTA (d) Sodium citrate
- 15 In cardiac cycle , this event takes 0.1 seconds to occur  
(a)Atrial systole(b)Ventricular systole(c)Complete cardiac diastole(d)None

**Q-2 ANSWER IN SHORT (ATTEMPT ANY SIX) 12**

- 1 Define the word parasite.
- 2 Write the name of helminth parasite whose primary host is man and the intermediate host is a Cyclops.
- 3 .Write the preventive methods of AIDS.
- 4 Write the symptoms of Atherosclerosis.
- 5 What is passive flight adaptation.?
- 6 Why camel is called as the “ship of desert”?
- 7 What is electric organ?
- 8 Define : Bioluminations.
- 9 How sodium citrate & sodium oxalate prevent blood clotting?
- 10 Which factors regulate the process of genesis of R.B.cs ?

**ANSWER IN DETAIL (ATTEMPT ANY FOUR— Q-3 TO Q-7)**

**Q-3 Write a note on AIDS. 9**

**OR**

**Q-3 Describe Atherosclerosis. 9**

**Q-4 Describe the bionomics morphology, life-history & pathogenecity of the pinworm. 9**

**OR**

**Q-4 Describe the binomics morphology, life-history & pathogenecity of the hookworm. 9**

**Q-5 A List the adaptations of arboreal animals. 4**

**B Write a note on cursoreal adaptations. 5**

**OR**

**Q-5 Describe cold region adaptation. 9**

**Q-6 A Write a note on camouflage. 4**

**B Write a note on Echolocation. 5**

**OR**

**Q-6 Describe : Fresh water adaptations. 9**

**Q-7 Describe the “ABO” system of blood groups & add a note on Rh factor. 9**

**OR**

**Q-7 Explain briefly the internal structure of heart & add a note on working of heart. 9**

M.B. Patel Science College ( C.E.Society)  
S.Y.B.Sc Internal Examination : 2011-12  
Time: 02<sup>4</sup>-05 pm

Subject:USO3EZ -01  
Date: 24.09.11  
Marks: 60

Q.1. Multiple Choice questions:

Attempt any 12

[1X12=12]

(1)Eversion of proboscis in Nereis is brought about by:

- (a)Circular muscle (b) Retractor muscle (c) Protractor muscle (d) None

(2)Festilium is secreted by:

- (a)Nereis (b) Male heteronereis (c) Female heteronereis (c) Both

(3)In Liver fluke anus is present on:

- (a)Posterior end (b) Dorsal side (c) Ventral side (d) Not present

(4)Excretion in Liverfluke is done by

- (a)Protonephridia (b) Malpighian tubule (c) Kidney (d) None

(5) Branchial heart of sepia is

- (a)pulsatile heart (b)Tubular heart (c)Ampullar heart (d) two chambered heart

(6) Blood vessel which brings oxygenated blood to heart is

- (a)pulmonary artery(b)pulmonary vein(c)main aorta(d)coronary artey

(7) the lymph vessels present in intestinal region is called

- (a)cistern chili (b)thoracic duct (c)lacteals (d)none

(8) The event which takes 0.3 seconds to occur in cardiac cycle is

- (a)Atrial systole (b)ventricular systole (c)complete cardial diastole (d)none

(9) Hormones secreted by adrenal medulla and neurohypophysis are

- (a) Amines (b)steroids (c)proteins (d) none

(10) The secrtions of endocrine glands are called

- (a)Hormones (b)Phermones (c)Enzymes (d) a and b both

[1]  
3

[P.T.O]

- (11) Hormones are referred as  
(a) species specific (b) antigens (c) chemical messengers (d) a and b both
- (12) Oxytocin is secreted by  
(a) Neurohypophysis (b) Thyroid gland (c) Parathyroid gland  
(d) Adenohypophysis
- (13) Forensic medicines help to catch the  
(a) Murderer (b) Doctor (c) Scientist (d) Genetician
- (14) Atherosclerosis caused by the deposition  
(a) Vitamins (b) protein (c) cholesterol (d) Fat
- (15) Name the bacterial disease  
(a) AIDS (b) Malaria (c) Gonorrhoea (d) Genital Herpes
- (16) Pin worm is very common in  
(a) Sheep (b) children (c) Pig (d) Dog

Q.2. Attempt any 6.

[6X2=12]

- (a) Write characteristic features of heteroneres.  
(b) What is epitoky?  
(c) Write habit and habitat of Liverfluke.  
(d) What is cardiac cycle?  
(e) Explain the words : Systole and Diastole  
(f) Explain shortly – Blood pumps.  
(g) What are hormones?  
(h) What are target organs?  
(i) What are exocrine and endocrine glands?  
(j) Describe importance of forensic medicine.  
(k) Write the symptoms of sleeping sickness.  
(l) Write the symptoms of atherosclerosis.

[P.T.O]

$\frac{[2]}{3}$

\* Attempt any 3

[3X12=36]

Q.3. Explain the alimentary canal of Neres with diagram and add a note on food , feeding and digestion.

OR

Q.3. Describe the reproductive system of Fasciola hepatica in detail.

Q.4 What is lymph. Describe the lymphatic system in Detail.

OR

Q.4. Write short notes on: [6X2=12]

(a) Anticoagulants

(b) Blood transfusion

Q5 Describe histological features of Pitutary glands and its hormonal secretion.

OR

Q.5. Describe the mechanism of action of water and lipid soluble hormones.

Q6. Describe types of culture media for cells and tissues.

OR

Q6. Describe structure, pathogenecity, prevention and control of the pinworm.

*ALL THE BEST!*

[3]  
/3.

M.B.PATEL SCIENCE COLLEGE

Internal Examination 2011

S. Y. B.Sc.

US03CBO-01 BOTANY

Date: 21.09.2011

Marks : 60

Time - 2.00 - 5.00 pm

Q-1 Answer the multiple choice question (any Twelve)

(12)

- (1) The algae which is used as a supplement to diet -  
(a) Spirulina (b) Gleocapsa (c) Scytonema (d) Rivularia
- (2) The food kombu is obtained from -  
(a) Fucus (b) Laminaria (c) Sargassum (d) Chlorella
- (3) The Drug TSE-KO-TSOI is prepared from  
(a) Laminaria (b) Diatoms (c) Digenia (d) Cladophora
- (4) The Vegetative Reproduction by stolon occur in -  
(a) Vaucheria (b) Laminaria (c) Cladophora (d) Sargassum
- (5) Carrageenan is obtained from  
(a) Chondrus (b) Fucus (c) Laminaria (d) oscillatoria
- (6) Which of the following is classified under class Chlorophyceae -  
(a) Gleocapsa (b) Rivularia (c) Cladophora (d) Nostoc
- (7) In Albugo conidia are produced in  
(a) Acropetal succession (c) Basipetal succession  
(b) Longitudinal manner (d) Irregular manner
- (8) Motile Haploid spores are also known as -  
(a) Zoospore (b) Aplanospore (c) Conidia (d) Zygosporangium
- (9) Albugo candida is an example of  
(a) Obligate parasite (c) Obligate saprophyte  
(b) Facultative saprophyte (d) Facultative parasite
- (10) Fruiting body of peziza  
(a) Perithecium (b) Apothecium (c) basidiocarp (d) Cleistothecium
- (11) Micro and macroconidia are produced in -  
(a) Alternaria (b) Aspergillus (c) Mucor (d) Fusarium
- (12) Conidia forms a cushion like structure in colletotrichum called -  
(a) Apothecium (b) Acervulus (c) Cleistothecium (d) Coremia
- (13) Causal organism of citrus canker disease is -  
(a) Albugo candida (b) Xanthomonas citri (c) Puccinia recondita (d) None of the above
- (14) Brown rust of wheat caused by -  
(a) Pythium aphanidermatum (b) Alternaria Solani  
(c) Puccinia recondite (d) Albugo candida
- (15) Conidia are beaked and muriform in -  
(a) Puccinia recondite (b) Albugo candida (c) Alternaria Solani (d) All of the above

Q.2 Short answer question (Any Six)

(12)

- (a) Define the Akinets
- (b) write the experimental use of algae
- (c) What is Heterocyst
- (d) Mention any Four Algae used as food
- (e) Classification of albugo
- (f) Vegetative structure of Pythium

- (g) Differentiate Micro and Macro Conidia of Fusarium
- (h) Fruiting Body of Peziza
- (i) Symptoms of Foot rot of Papaya
- (j) Symptoms of White Rust of Crucifers

**LONG ANSWER QUESTION (ANY FOUR)**

✓ Q.-3 Describe the Thallus Structure and Reproduction in Rivularia (09)

OR

Q.-3 Write a Note on Role of Algae in Industries.

Q.-4 Describe the Thallus Structure and Reproduction in Cladophora (09)

OR

Q.-4 Write Short note on

(a) Asexual Reproduction in Vaucheria (05)

(b) Sexual Reproduction in Cladophora (04)

Q.-5 Describe the Sexual Reproduction in Pythium (09)

OR

Q.-5 Explain Asexual Reproduction in Albugo

✓ Q.-6 Describe Asexual Reproduction in Aspergillus (09)

OR

Q.-6 Write a Note on Conidia Formation in Colletotrichum

Q.-7 Describe Symptoms, Causal organism, Disease Cycle and control measure of Late Blight of Potato (09)

OR

Q.-7 Describe Symptoms, Causal organism, Disease Cycle and control measure of Tikka Disease of Ground Nut

M.B.PATEL SCIENCE COLLEGE, ANAND.

Third Semester Theory Internal Test 2011-12.

S.Y.B.Sc (Botany). US03CBO-02

Date:- 22/09/2011.

Time:- 2:00 To 5:00pm.

Marks:- 60.

Q-1 Multiple Choice Questions. (Attempt any 12).

(12)

- (1) Apical meristem is \_\_\_\_\_ in position.  
(a) Basal (b) Terminal  
(c) Lateral (d) Intercalary.
- (2) Which one is the element of xylem?  
(a) Sieve element (b) Companion cell  
(c) Bast fibre (d) vessels.
- (3) Find out the wrong statement.  
(a) Xylem fibres are also known as wood fibre.  
(b) Secondary xylem arises from the vascular cambium  
(c) Phloem fibres are associated with storage of food.  
(d) companion cells are involved in maintenance of a pressure gradient in sieve tube.
- (4) Legume type fruit is seen in family  
(a) Annonaceae (b) Lamiaceae  
(c) Leguminosae (d) Meliaceae.
- (5) Find out the plant of Meliaceae family.  
(a) Osimum sanctum (b) Cassia fistula  
(c) Ixora coccinea (d) Melia azadirachta.
- (6) Hypogynous flower means  
(a) Superior ovary (b) Inferior ovary  
(c) Semi inferior ovary (d) None of the above.
- (7) Bast fibre are obtained from  
(a) Cocos (b) Corchorus  
(c) Musa (d) Gossypium.
- (8) Botanical name of cotton plant is  
(a) Crotonaria (b) Corchorus  
(c) Gossypium (d) Cinchona.

- (9) Mustard oil is obtained from \_\_\_\_\_ of the plant.  
(a) Fruit (b) leaves (c) Root **(d) Seeds.**
- (10) Photolysis of water associated with  
(a) Ps -I (b) Ps -II (c) Cytochrome -b (d) Quinone.
- (11) First stable product of  $C_3$  cycle is  
(a) Ribulose (b) **Xylose**  
(c) Phosphoglyceric acid (d) **None Of the above.**
- (12) Stomata open during the day time because the guard cells  
(a) are thin walled (b) **photosynthesize and produce osmotically active sugars**  
(c) have to help in gaseous exchange (d) **are bean shaped.**
- (13) Germination of seed is promoted by  
(a) Green light (b) Blue light  
(c) Red light (d) Infrared light.
- (14) Which of the following induces flowering in long day plant?  
(a) Gibberellins (b) Auxins (c) Cytokinin (d) **Ethylene.**
- (15) Seed dormancy is due to  
(a) **Ethylene** (b) **Auxin** (c) **Abscic acid** (d) Starch.

Q-2 Answer the following ( Attempt any six)

(12)

1. Write the characteristic of parenchyma.
2. Mention the elements of xylem.
3. Define Actinomorphic and Zygomorphic.
4. Differentiate between Monadelphous and Didelphous.
5. Give family, botanical name and part of the plant from which Jute and Cotton obtained.
6. Mention three uses of Rice and Wheat plant.
7. Write in brief non-cyclic photophosphorylation.
8. What is Kranz anatomy ?
9. Write a note on short day plant.
10. Describe germination of seed.

Answer the following (Attempt any four)

Q-3 Explain the structure and function of xylem (09)

OR

Q-3 Write a note on meristem. (09)

Q-4 Describe the general characters of the family Leguminosae. (09)

OR

Q-4 Describe the floral characters and economic importance of the family Meliaceae. (09)

Q-5 Explain biological source, cultivation, geographical distribution and uses of Cotton. (09)

OR

Q-5 Describe geographical distribution, cultivation and uses of Mustard oil. (09)

Q-6 What are macro and micronutrients? Describe role and deficiency symptoms of N, K & Fe. (09)

OR

Q-6 Define transpiration and guttation. Give the difference between transpiration & guttation. (09)

Q-7 What is seed dormancy? What causes it? (09)

OR

Q-7 What do you understand by photoperiodism? Describe its significance. (09)

ALL THE BEST

M. B. PATEL SCIENCE COLLEGE, ANAND  
INTERNAL EXAMINATION – 2011  
S. Y. B. Sc BOTANY US03 ELBOT 01

DATE- 23-09-11  
TIME 2:00-5:00pm

MARKS 60

Q. 1 MULTIPLE CHOICE QUESTION (ATTEMPT ANY 12) (12)

- ① 1) The special pigment gleocapsin is present in  
a) Nostoc b) Gleocapsa c) Microcystis d) Chlorella
- 2) The CFTRI research is being conducted on the use of  
a) Chlorella b) Fucus c) Spirulina d) Sargassum
- 3) Which of the following algae is classified under the order Chroococcales?  
a) Rivularia b) Gleocapsa c) Scytonema d) Gleotrichia
- ③ 4) The antibiotic Chlorellin is obtained from  
a) Cladophora b) Polysiphonia c) Fucus d) Chlorella
- 5) Haustoria are produced by  
a) Fungal parasite of animal  
b) Intercellular hyphae of obligate parasite.  
c) Fungi grown on artificial media  
d) Intracellular hyphae of parasite fungi
- 6) Thick walled resting spores produced by the member of peronosporales are called  
a) oospore b) ascospore c) zygospore d) zoospore
- ④ 7) In Albugo conidiosporangia are produced in  
a) Acropetal succession b) Basipetal succession  
c) Longitudinal manner d) Irregular manner
- 8) In Albugo the antheridium is called paragynous because the antheridium  
a) Grow beside the oogonium  
b) Encircles the oogonium  
c) Remains at the base of oogonium  
d) Grow on the oogonial wall

9) Electron microscope is designated by ✓  
a) Farmer and Moore b) Jacob and Monod  
d) Knoll and Ruska d) None of the above

10) Annular Phase Plate is the part of  
a) Binocular microscope b) Compound microscope  
c) Electron microscope d) Phase Contrast microscope

7) 11) Power of ocular is 10x and objective lens is 40x respectively, then total magnification of a specimen is  
a) 40x b) 50x c) 100x d) 400x

12) Instead of lenses high power magnets are used in  
a) Compound microscope b) Electron microscope  
c) Fluorescence microscope d) none of the above

8) 13) Which of the following is the type of microtome?  
a) Smears b) Coal tar c) CRAF d) Rotary

14) Which one is not fixatives?  
a) CRAF b) Carnoy's fluid c) FAA d) Paraffin wax

15) The algae used as food is  
a) Spirulina b) Fucus c) Cladophora d) Sargassum

16) Agar-Agar is obtained from  
a) Nostoc b) Vaucheria c) Porphyra d) Gelidium

*Myco*

**Q. 2 SHORT ANSWER QUESTION ( ATTEMPT ANY 6) (12)**

- 1) Classify the alga spirulina. ✓
- 2) Mention any three uses of agar-agar. ✓
- 3) What is microtome? ✓
- 4) Give the classification of Pythium.
- 5) Give a brief account vegetative structure of Pythium.
- 6) Classification of Albugo. *and Pythium*
- 7) What is resolving power? ✓
- 8) Describe eyepiece and condenser lenses. ✓
- 9) What are the uses of Phase Contrast microscope. ✓
- 10) Mention the fixatives. ✓
- 11) What is hormogonia? ✓
- 12) Define the heterocyst.

**LONG ANSWER QUESTION (ATTEMPT ANY 3 FROM Q.3 – Q.6)**

- Q. 3 a) Method of branching in Scytonema. (06)  
b) Agar- Agar (06)

OR

- Q. 3 a) Algae as food. (06)  
b) Thallus structure and reproduction in Spirullina. (06)

- Q. 4 Describe the sexual reproduction in Albugo. (12)

OR

- Q. 4 a) Ex[plain the asexual reproduction in Pythium. (09)  
b) Describe mycelium of Albugo. (03)

- Q. 5 a) Write the principle of Phase Contrast Microscope and describe its pathway. (06)  
b) Explain the Fluorescent Microscope with use. (06)

OR

- Q. 5 a) Explain Transmission Electron Microscope. (06)  
b) Describe Scanning Electron Microscope. (06)

- Q. 6 Write notes on  
a) Microtome (06)  
b) Free hand sectioning (06)

OR

- Q. 6 Write notes on (06)  
a) Embedding  
b) Maceration (06)

**BEST OF LUCK**