

No. of printed pages: 3

MFN-001

01192

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

December, 2011

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt any five questions in all.

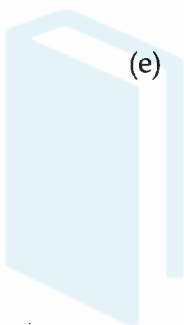
(ii) Question no. 1 is compulsory.

(iii) All questions carry equal marks.

1. (a) Match column A with column 'B' 10×1=10
- | A | B |
|------------------------------------|---------------------------------|
| (i) Hypocalcaemia | (A) T-lymphocytes |
| (ii) Degeneration of B cell | (B) Lymphoid tissue stimulation |
| (iii) Vasopressin | (C) Progesterone |
| (iv) Decrease acidity of bodyfluid | (D) Polyphagia |
| (v) Juxta glomerular cell | (E) Tetany |
| (vi) Pineal gland | (F) Depth of inspiration |
| (vii) Thymosin | (G) Melatonin |
| (viii) Corpus Luteum | (H) Renin |
| (ix) Pontine centre | (I) Antidiuretic hormone |
| (x) Interleukin | (J) Aldosterone |
| | (K) Trypsin |

- (b) Briefly explain the terms : 2x5=10
- (i) Presbiopia
 - (ii) Plastid
 - (iii) Universal blood donor
 - (iv) Haemostasis
 - (v) Phagocytosis
2. (a) Describe factors that affect the cardiac output. 8+12
- (b) Discuss the common causes of secondary hypertension.
3. (a) How will you provide artificial respiration ?
- (b) Discuss chemical control of respiration. 6+14
4. (a) What are the composition and function of Bile ? How is it secreted ? 10
- (b) Give the structure and functions of the Pancreas. 10
-
5. (a) How does the kidney maintain pH balance ? 10
- Discuss in relation to acid and alkaline diets.
- (b) Briefly discuss the renal function tests. 10
6. (a) Name the cranial nerves. 6
- (b) Discuss the effects of sympathetic and parasympathetic stimulations on the body system. 14

7. (a) Discuss structure and function of ovary. 8
(b) Schematically explain the organs involved in taste perception. 6
(c) Enlist the functions of the hormones produced by adrenal cortex. 6
8. Write short notes on *any four* of the following.
(a) Physiology of lactation. 5+5+5+5
(b) Endocrine glands in our body
(c) Major functions of cerebellum
(d) Difference between active and passive transport systems.
(e) Large Intestine - structure and functions.



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MFN-001

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

June, 2012

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt any five questions.

(ii) Question no. 1 is compulsory.

(iii) All questions carry equal marks.

1. (a) Give one example of each of the following :

10x1=10

(i) Leukocytes

(ii) Male Contraceptive

(iii) Coverings of the eye

(iv) Constituents of Bile

(v) Spinal nerves

(vi) Renal Function Tests

(vii) Lobes of cerebral cortex

(viii) Disorders of image formation

(ix) Types of antibodies

(x) Hormones secreted by Anterior
Pituitary gland.

- (b) Define the following : **10**
- (i) Haemopoiesis
 - (ii) Macrophages
 - (iii) Mitosis
 - (iv) Phagocytosis
 - (v) Atherosclerosis
2. (a) Explain the physiology of lactation. **10**
- (b) Describe the common disorders of Female Reproductive System. **10**
3. (a) Explain the structure of Pancreas with the help of suitable diagram. **10**
- (b) Describe the functions of different hormones secreted by Pancreas. **10**
4. (a) Describe the structure of ear with the help of suitable diagram **10**
- (b) Explain the mechanism of hearing. **10**
5. (a) What do you understand by the term 'ageing'? **4**
- (b) Explain the various theories of ageing. **4**
- (c) Describe the age related changes seen in different body systems and tissues **12**

6. Define anaemia and explain the different types of anaemia 20
7. (a) Describe the structure of kidney with the help of a diagram. 10
(b) Explain the process of urine formation. 10
8. Write short notes on *any four* of the following : 5+5+5+5
- (a) Structure and functions of a neuron
 - (b) Permanent methods of contraception
 - (c) Glaucoma
 - (d) Antibody Mediated Immune System
 - (e) Haemostasis

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MFN-001

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

December, 2012

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

- Note :**(i) Attempt *any five* questions.
(ii) Question No. 1 is compulsory
(iii) All questions carry equal marks

1. (a) Give one example of each of the following :

1x10=10

- (i) Endocrine glands
- (ii) Female contraceptives
- (iii) Retinal cells
- (iv) Types of Deafness
- (v) Cranial nerves
- (vi) Types of Blood cells
- (vii) Renal Functions Tests
- (viii) Ventricles of the Brain
- (ix) Enzymes of Gastric Juice
- (x) Hormones Secreted by Posterior Pituitary Gland.

- (b) Explain in 2-3 sentences each of the following terms : 2x5
- (i) Autoimmunity
 - (ii) Peripheral nervous system
 - (iii) Gustation
 - (iv) Loop of Henle
 - (v) Cardiac Output
2. (a) What do you understand by the term, "Nutrition" ? 4
- (b) Describe the classification of nutrients. 6
- (c) Discuss the various nutritional components and their relation with physiology. 10
3. (a) What is Blood Pressure ? 4
- (b) Explain the various factors affecting the Blood Pressure. 6
- (c) Discuss the blood pressure regulatory mechanisms. 10
4. (a) Describe in brief the female reproductive organs. 5
- (b) What are the functions of uterus ? 5
- (c) Explain the process of menstrual cycle. 10

5. (a) Explain the structure of Thyroid Gland with the help of suitable diagram. 8
- (b) Enlist the various functions of the thyroid gland. 4
- (c) Describe the disorders caused by hypo secretion or hyper secretion of the thyroid hormones. 8
6. (a) Describe the structure of eye with the help of a suitable diagram. 8
- (b) Explain the various disorders of image formation with suitable diagrams. 12
7. (a) Explain the structure of stomach with help of suitable diagram. 6
- (b) Describe the mechanism of secretion of the gastric juice. 7
- (c) Write the composition and functions of the gastric juice. 7
8. Write Short Notes on *Any Four* of the following : 5+5+5+5
- (a) Anaemia
- (b) Emergency contraception
- (c) Communication between neurons
- (d) Cataract
- (e) Kidney Transplant
-

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MFN-001

MASTER OF SCIENCE (DIETETICS AND FOOD SERVICE MANAGEMENT)

Term-End Examination

June, 2013

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

- Note :** (i) Attempt **any five** questions.
 (ii) Question No. 1 is compulsory.
 (iii) All questions carry equal marks.

1. (a) Match column 'A' with column 'B' 1x10=10

A	B
(i) Growth	(A) Maturation of function
(ii) Vitamin C	(B) Blood clotting
(iii) Vitamin B ₁₂	(C) Ribosome
(iv) Vitamin K	(D) Scurvy
(v) Development	(E) Increase in size
(vi) Lysosome	(F) Extra uterine erythropoiesis
(vii) De differentiation	(G) Intracellular Digestion
(viii) Endoplasmic Surface	(H) Reverting back to meristematic state
(ix) Cell Theory	(I) Megablastic Anaemia
(x) Bone Marrow	(J) Omnis cellulae -e cellulae
	(K) AB Group

(b) Briefly explain the following terms : **2x5=10**

- (i) Platelet
- (ii) Prokaryotic cell
- (iii) Age related changes in body systems
- (iv) Types of antibodies
- (v) Types of connective tissues

2. (a) Discuss the factors affecting the blood pressure. **14**

(b) How will you keep your heart healthy ? **6**

3. (a) What are the neural mechanisms for control of respiration ? **6**

(b) Discuss the functions of centres in brain that regulate the respiration. **14**

4. (a) Describe the structure of tongue with the help of a diagram. **12**

(b) Discuss the functions of saliv. **8**

5. (a) What is GFR ? Describe the factors affecting GFR. **2+10**

(b) Discuss the formation of urine through selective reabsorption. **8**

6. (a) Discuss the process of synaptic transmission with the help of a diagram. 12
- (b) Draw a diagram of the neuron and enumerate its functions. 8
7. (a) Enlist the hormones secreted from Pancreas. 4
- (b) Discuss the regulation of secretion of insulin. 10
- (c) Explain the functions of insulin. 6
8. (a) What is the role and function of the placenta ? 6
- (b) Describe the growth and development of fetus upto 32 weeks of gestation. 14

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MASTER OF SCIENCE (DIETETICS AND FOOD SERVICE MANAGEMENT)

Term-End Examination
December, 2013

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

- Note :** (i) Attempt *any five* questions.
(ii) Question No. 1 is compulsory.
(iii) All questions carry equal marks.

1. (a) Match column 'A' with column 'B' : 1x10=10

A	B
(i) William Harvey	(A) Cork cell
(ii) DNA	(B) Cell wall
(iii) Prokaryotic Cell	(C) Eosinophil
(iv) Granulocyte	(D) Genetic material
(v) Robert Hooke	(E) AB Group
(vi) Organelles	(F) Physiologist
(vii) Glycoproteins	(G) Cytoplasm
(viii) Eukaryotic Cell	(H) Erythropoietin
(ix) Platelets	(I) Absence of nuclear membrane
(x) Universal Recipient	(J) ITP
	(K) Vitamin B ₁₂

- (b) Briefly explain the following terms : **2x5=10**
- (i) Phagocytosis
 - (ii) Function of Plasma Proteins
 - (iii) Steps of mitosis
 - (iv) Cytoskeleton
 - (v) Theories of Ageing
2. (a) What are the uniqueness of heart ? **10**
- (b) Briefly describe the Cardiac Cycle. **10**
3. (a) Explain the composition of air. **4**
- (b) Describe the transport of oxygen in blood. **16**
4. (a) Name the enzymes secreted by small intestine. **4**
- (b) Discuss the digestion of food in the small intestine. **16**
5. Describe the renal function tests done commonly in practice. **20**
6. (a) What are the various processes of transport through cell membrane ? **5**
- (b) Discuss the passive transport mechanism in detail. **15**

7. (a) What are the parts of midbrain ? 4
- (b) Discuss the structure and functions of : 8+8
- (i) Cerebellum and
- (ii) Spinal Cord
8. (a) Describe the structure of eyeball, with the help of diagrams. 14
- (b) Compare the properties of rods and cons. 6



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MFN-001

M.SC. (DFSM)

Term-End Examination

June, 2014

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : *Question 1 is compulsory. Attempt five questions.*

All questions carry equal marks.

1. (a) Give one example of each of the following: 10

i) Connective Tissue

ii) Types of Joints.

iii) Disorders of Image formation.

iv) Male Reproductive organs.

v) Hormones secreted by Pineal Gland

vi) Modern methods of contraception

vii) Types of Immunity.

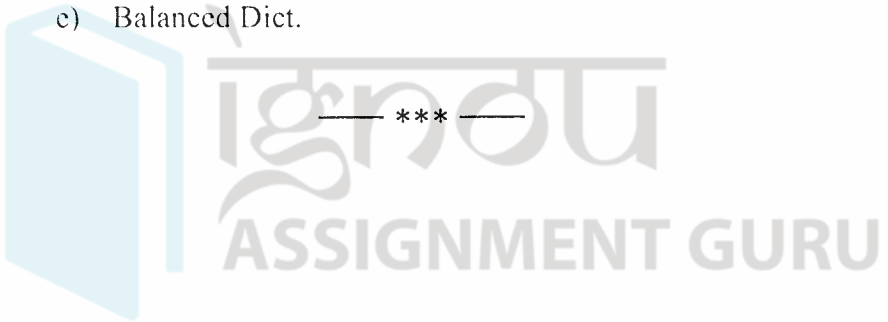
viii) Enzymes of Gastric Juice.

- ix) Parts of Nerve cells.
- x) Parts of Large Intestine.
- (b) Explain each of the following terms in 2-3 sentences: **10**
- i) Dialysis.
- ii) Enzymes.
- iii) Parkinson's disease
- iv) Osmosis.
- v) Cataract
2. (a) Describe the muscles which help in the respiration. **10**
-
- (b) Explain the chemical control of respiration. **10**
3. (a) Explain the process of urine formation.. **10**
- b) Describe the normal and abnormal constituents of the urine. **10**

4. a) What is anaemia? 5
- b) Classify the anaemia. 5
- c) Describe the physiological causes of different types of anaemia. 10
5. a) Enumerate the types and functions of the cranial nerves. 10
- b) Explain a synapse and the process of synaptic transmission. 10
6. a) Describe the composition and functions of the bile juice. 10
- b) Explain the process of digestion of proteins in the human body. 10
-
7. (a) Describe the structure and functions of the middle ear. 8
- b) Explain the various disorders related to the hearing and their management. 12

8. Write short Notes on *any FOUR* of the following: **5+5+5+5**

- a) Hypertension
- b) Physiological changes during lactation
- c) Renal function Tests.
- d) Female contraceptives
- e) Balanced Diet.



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MFN-001

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

December, 2014

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt *any five* questions.

(ii) Question No. 1 is compulsory.

(iii) All questions carry equal marks.

1. (a) Give one example of each of the following :

(i) Types of White Blood Cells **1x10=10**

(ii) Types of Muscles

(iii) Organs of Immune System

(iv) Organs of Female Reproductive System

(v) Enzymes in the Pancreatic Juice

(vi) Bones of the middle ear

(vii) Endocrine Glands

(viii) Abnormal constituents of the urine

(ix) Sensory organs of hearing

(x) Retinal cells

(b) Explain in **2-3** sentences each of the following terms :

2x5=10

(i) Antibody

(ii) Ageing

(iii) Grave's Disease

(iv) Polycythaemia

(v) Hormones

2. (a) Explain the pathophysiology of Hypertension. 10+10
(b) Discuss the factors affecting blood pressure.
3. Enumerate the hormones produced by the adrenal cortex and describe their functions. 5+15
4. (a) Describe the structure and functions of the nephron. 10
(b) Explain the two processes involved in the transportation of substances across the cell membrane. 10
5. Describe the structure and functions of the Central Nervous System (CNS). 20
6. (a) Describe the composition of blood. 10
(b) Explain the various functions of blood. 10
7. (a) Describe the structure of the salivary glands. 10
(b) Write the composition and functions of the Saliva. 10
8. Write short notes on **any four** of the following :
 - (a) Female Reproductive organs. 5+5+5+5
 - (b) Disorders of image formation by the eye
 - (c) Types of tissues
 - (d) Innate Immunity
 - (e) Disorders of Thyroid Gland.

ई.आर.डी.-01

स्नातक उपाधि कार्यक्रम

सत्रांत परीक्षा

दिसम्बर, 2014

ई.आर.डी.-01 : भारत में ग्राम विकास

समय : 3 घण्टे

अधिकतम अंक : 100

नोट : खंड 'क' से किन्हीं दो प्रश्नों, खंड 'ख' से चार प्रश्नों और खंड 'ग' से पाँच प्रश्नों के उत्तर दीजिए।

खंड - क

किन्हीं दो प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न का उत्तर लगभग 500 शब्दों में हो। प्रत्येक प्रश्न के 20 अंक हैं।

1. भारतीय समाज की ग्रामीण सामाजिक संरचना को स्पष्ट कीजिए। 20
2. पंचायती राज संस्थाओं के उद्देश्यों, संरचना तथा कार्यों का वर्णन कीजिए। 20
3. सूखा प्रवण क्षेत्र कार्यक्रम की व्याख्या कीजिए। 20
4. राष्ट्रीय ग्रामीण रोजगार कार्यक्रम की कार्रवाई संबंधी समस्याओं पर प्रकाश डालिए। 20

खंड-ख

किन्हीं चार प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न का उत्तर लगभग 250 शब्दों में हो। प्रत्येक प्रश्न के 10 अंक हैं।

5. ग्राम विकास योजना से संबंधित कार्यप्रणाली की संक्षेप में विवेचना कीजिए। 10
6. प्रबंध के विभिन्न कार्यों का वर्णन कीजिए। 10
7. पंचायती राज संस्थाओं के इतिहास का मूल्यांकन कीजिए। 10
8. मरुस्थल विकास कार्यक्रम की संक्षिप्त व्याख्या कीजिए। 10
9. ग्रामीण बेरोजगारी की प्रमुख विशेषताओं का वर्णन कीजिए। 10
10. ग्रामीण भूमिहीन रोजगार गारंटी कार्यक्रम के विशिष्ट कार्यक्रम दृष्टिकोण की संक्षेप में व्याख्या कीजिए। 10

खंड-ग

निम्नलिखित में से किन्हीं पाँच पर प्रत्येक लगभग 100 शब्दों में टिप्पणियाँ लिखिए। प्रत्येक भाग के चार अंक हैं।

11. (a) ग्रामीण क्षेत्रों में महिला व बाल विकास का परियोजना कार्यकलाप 4
- (b) ग्रामीण प्रौद्योगिकी का हस्तांतरण 4
- (c) देखरेख में निर्धारित समयबद्ध कार्यक्रम का पालन 4
- (d) सहकारिता का विकास 4
- (e) ग्रामीण जल आपूर्ति स्कीम (RWS) 4
- (f) ग्राम विकास और अंतर्राष्ट्रीय संस्थाएँ 4
- (g) गुड़गाँव परियोजना 4
- (h) क्षेत्रीय ग्रामीण बैंक 4

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MFN-001

**MASTER OF SCIENCE (DIETETICS AND
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Term-End Examination

June, 2015

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt *any five* questions.

(ii) Question No. 1 is *compulsory*.

(iii) *All* questions carry *equal* marks.

1. (a) Give one example for each of the following : 1x10=10

(i) Enzyme of Gastric Juice

(ii) Connective Tissue

(iii) Type of muscle tissue

(iv) Type of Antibody

(v) Unicellular organism

(vi) Renal Function Tests

(vii) Errors of refraction

(viii) Endocrine Glands

(ix) Retinal Nerve Cells

(x) Spinal nerves

(b) Briefly explain the following terms in

2 - 3 sentences each :

2x5=10

(i) Cyanosis

(ii) Tidal Volume

(iii) Alzheimer's disease

(iv) Enzymes

(v) Puberty

2. (a) Explain the structure and functions of the heart. **10+10**
(b) Describe the unique properties of the heart.
3. (a) Explain the structure and functions of the stomach. **10+10**
(b) Describe the composition and functions of the gastric juice.
4. Describe the structure and functions of the Autonomic Nervous System. **5+15**
5. (a) Draw and label the different parts of a nephron. Enlist the various functions of kidney. **6+4**
(b) Explain the process of urine formation in the human body. **10**
6. (a) What do you understand by the term "Endocrine Glands" ? **4+4+12**
(b) Enlist the endocrine glands present in human body.
(c) Describe the structure and functions of any of the endocrine glands.
7. Explain the following terms briefly : **4x5=20**
(a) Sinus Bradycardia
(b) Sinus Tachycardia
(c) Sinus Arrhythmias
(d) Ventricular Fibrillation
(e) Secondary Hypertension

8. Write short notes on **any four** of the following :

- (a) Functions of Liver 5+5+5+5
 - (b) Mid Brain
 - (c) Contraception
 - (d) Structure and function of middle ear
 - (e) Mechanics of Respiration
-



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Term-End Examination

December, 2015

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt any five questions.

(ii) Question No. 1 is compulsory.

(iii) All questions carry equal marks.

1. (a) Give one example for each of the following : **1x10=10**
- (i) Enzyme of intestinal juice
 - (ii) Type of Muscular Tissue
 - (iii) Type of Joint
 - (iv) Cranial Nerve
 - (v) Temporary method of female contraception
 - (vi) Disorder of Thyroid Gland
 - (vii) Constituent of Bile
 - (viii) Liver Function Test
 - (ix) Type of White Blood Cells
 - (x) Bone of Middle Ear
- (b) Briefly explain the following terms : **2x5=10**
- (i) Autoimmunity
 - (ii) Contraception
 - (iii) Cardiac output
 - (iv) Glaucoma
 - (v) Vital Capacity

2. Describe various external and internal defence mechanisms of human body. 20
3. (a) Define ageing. 2+8+10
(b) Explain various theories of ageing.
(c) Describe various age related changes observed in body system.
4. Describe the composition and functions of the blood. 20
5. (a) Explain the process of urine formation. 8+12
(b) Describe the normal and abnormal constituents of the human urine.
6. (a) Explain the structure and functions of the pancreas. 10+10
(b) Describe the composition and function of bile juice.
7. (a) Describe the structure of the Eye with the help of suitable diagram. 10+10
(b) Discuss the disorders of image formation by the eye and their correction.
8. Write short notes on **any four** of the following :
 - (a) Hormones secreted by Pituitary Gland 5+5+5+5
 - (b) Lobes of Cerebral Cortex
 - (c) Structure of tongue
 - (d) Causes of female infertility
 - (e) Male Puberty

No. of Printed Pages : 2

MFN-001

00370

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

June, 2016

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt any five questions.

(ii) Question No. 1 is compulsory.

(iii) All questions carry equal marks.

1. (a) Give one example for each of the following :
- (i) Short bones 1x10=10
 - (ii) Blood cells
 - (iii) Male reproductive organs
 - (iv) Enzymes of the Gastric Juice
 - (v) Liver functions tests
 - (vi) Parts of large intestine
 - (vii) Hinge Joint
 - (viii) Modern methods of female contraception
 - (ix) Signs of vitamin A deficiency
 - (x) Types of Anaemia
- (b) Explain the following terms in 2-3 sentences each : 2x5=10
- (i) Antigen
 - (ii) Enzymes
 - (iii) Anaemia
 - (iv) Inflammation
 - (v) Leukocytosis

2. (a) Describe the composition and functions of the bile juice. 8
- (b) Explain the process of digestion of proteins in the body. 12
3. (a) With the help of suitable examples, differentiate between active and passive mechanism of transport across the cell membrane. 10
- (b) Describe in brief the renal function tests used to evaluate the renal function in a patient. 10
4. (a) Draw a labelled diagram of the eye. 6
- (b) Describe the various disorders of image formation by the eye. 14
5. (a) Draw a labelled diagram of female reproductive system. 8
- (b) Describe in brief the disorders affecting the reproductive function. 12
6. (a) What is anaemia ? 3
- (b) How would you classify anaemias ? 7
- (c) Describe the various causes of anaemia and their prevention. 10
7. (a) Enlist the various endocrine glands present in human body. 5
- (b) Describe in detail the structure and functions of thyroid gland. 15
8. Write short notes on **any four** of the following :
 - (a) Structure and functions of Mid Brain 5+5+5+5
 - (b) Structure and functions of Liver
 - (c) Composition and functions of the Saliva
 - (d) Factors affecting Hypertension
 - (e) White Blood Cells (Leukocytes)

No. of Printed Pages : 2

MFN-001

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

December, 2016

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) *Attempt any five questions.*

(ii) *Question No. 1 is compulsory.*

(iii) *All questions carry equal marks.*

-
1. (a) Give one example for each of the following : 1x10=10
- (i) White Blood Cells
 - (ii) Flat bones
 - (iii) Epithelial Tissue
 - (iv) Enzymes in Pancreatic Juice
 - (v) Abnormal Constituents of the urine
 - (vi) Female Reproductive Organs
 - (vii) Connective Tissue
 - (viii) Parts of small intestine
 - (ix) Disorders of image formation by the eye
 - (x) Renal Function Tests
- (b) Explain the following terms in 2-3 sentences each : 2x5=10
- (i) Hormones
 - (ii) Night Blindness
 - (iii) Leucopenia
 - (iv) Synapse
 - (v) T Cells

2. Describe the structure and functions of the Central Nervous System (CNS). 20
3. (a) Describe in brief the various functions of the blood. 10
(b) Discuss the various factors affecting the Blood Pressure (BP). 10
4. (a) With the help of suitable diagram describe the structure of respiratory system. 8
(b) Discuss the chemical control of respiration. 6
(c) How will you provide artificial respiration? 6
5. (a) Describe the structure of excretory system with the help of suitable diagram. 8
(b) How does the kidneys maintain pH balance? 6
(c) Discuss in brief the renal function tests. 6
6. (a) Enumerate the cranial nerves. 6
(b) Discuss the effect of sympathetic and parasympathetic stimulations on the body system. 14
7. (a) What do you understand by the term 'ageing'? 4
(b) Describe the various theories of ageing. 6
(c) Explain the age related changes seen in different systems of the body. 10
8. Write short notes on **any four** of the following : 5x4=20
(a) Methods of contraception in females.
(b) Refractive Errors.
(c) Prevention of Anaemia in pregnant women.
(d) Types of White Blood Cells (WBCs).
(e) Physiology of Lactation.
-

No. of Printed Pages : 2

MFN-001

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

June, 2017

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

- Note : (i) Attempt five questions in all.
(ii) Question No. 1 is compulsory.
(iii) All questions carry equal marks.*

1. (a) Give one example of each of the following :
(i) Types of immunity. $1 \times 10 = 10$
(ii) Hormones secreted by Pituitary Gland.
(iii) Cranial Nerves.
(iv) Blood Cells.
(v) Types of Deafness.
(vi) Ventricles of Brain.
(vii) Types of Malnutrition.
(viii) Liver Function Tests.
(ix) Disorders of platelets.
(x) Retinal Nerve Cells.
- (b) Explain the following terms in 2-3 sentences each : $2 \times 5 = 10$
(i) Facilitated Diffusion.
(ii) Hypoxia.
(iii) Bundle of HIS.
(iv) Pyloric orifice.
(v) Homeostasis.

2. (a) Draw a labelled diagram of digestive system.
(b) Describe the process of digestion of food in the small intestine. 10+10
3. (a) What are the various processes of transport through cell membrane ? 5+15
(b) Discuss the passive transport mechanism in detail.
4. Explain the following in brief : 10+10
(a) Haemodialysis
(b) Renal Function Tests
5. (a) Describe the structure of eye ball with the help of diagrams. 12+8
(b) Compare the properties of rods and cones.
6. (a) What is Blood Pressure ? 4+6+10
(b) Explain the various factors affecting the Blood Pressure.
(c) Discuss in detail the various B.P. regulatory mechanisms.
-
7. (a) Describe in brief the female reproductive organs. 5+5+10
(b) What are the various functions of the uterus ?
(c) Explain the process of menstrual cycle.
8. Write short notes on **any four** of the following :
(a) Types of Immunity. 5+5+5+5
(b) Contraception.
(c) Errors of refraction.
(d) Blood Cells.
(e) Disorders of Thyroid Gland.
(f) Types of Connective Tissue.

No. of Printed Pages : 2

MFN-001

02855

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

December, 2017

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt five questions in all.

(ii) Question No. 1 is compulsory.

(iii) All questions carry equal marks.

-
1. (a) Give one example of each of the following :
- (i) Types of Anaemia. 1x10=10
 - (ii) Disease of eye.
 - (iii) Renal Function Test.
 - (iv) Chambers of Heart.
 - (v) Endocrine Glands.
 - (vi) Female Contraceptive.
 - (vii) Process of Cell Division.
 - (viii) Types of Connective Tissue
 - (ix) Spinal nerves
 - (x) Abnormal Constituents of Urine.
- (b) Briefly explain the following terms in 2-3 sentences each :
- (i) Auto immunity 2x5=10
 - (ii) Haemodialysis
 - (iii) Cardiac out put
 - (iv) Cochlea
 - (v) Blood Urea Nitrogen (BUN)

2. (a) Describe the structure and functions of the heart. 12+8
(b) Discuss the factors affecting the Blood Pressure.
3. Describe the structure and functions of the Autonomic Nervous System. 20
4. (a) Describe the mechanism of respiration. 12+8
(b) Discuss the various neural mechanisms for control of respiration.
5. (a) Describe the structure of ear with the help of suitable diagrams. 12+8
(b) Discuss the functions of middle ear.
6. (a) Explain the structure of Liver with the help of suitable diagrams. 10+5+5
(b) Enlist the various functions of liver.
(c) Describe the regulation of secretion of insulin.
7. (a) What is the role and function of the placenta ? 5+15
(b) Describe the growth and development of foetus upto 32 weeks of gestation.
8. Write short notes on any four of the following :
(a) Renal Function Tests 5+5+5+5
(b) Contraception
(c) Gastric Juice
(d) Synaptic Transmission
(e) Refractive Errors
(f) Layers of Retina
-

No. of Printed Pages : 2

MFN-001

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT)**

Term-End Examination

June, 2018

01101

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt five questions in all.

(ii) Question No. 1 is compulsory.

(iii) All questions carry equal marks.

-
1. (a) Give one example for each of the following : **1x10=10**
- (i) White Blood Cells
 - (ii) Female Reproductive Organ
 - (iii) Short Bones
 - (iv) Endocrine Glands
 - (v) Kidney Functions Test (KFT)
 - (vi) Hinge Joint
 - (vii) Sign of Vitamin C deficiency
 - (viii) Types of Anaemia
 - (ix) Parts of Mid Brain
 - (x) Sign of Inflammation
- (b) Explain the following terms in 2-3 sentences each : **2x5=10**
- (i) Polycythemia
 - (ii) Osmosis
 - (iii) Inflammation
 - (iv) Antibodies
 - (v) Atherosclerosis

2. (a) Describe the composition and functions of Gastric Juice. **10+10**
(b) Explain the process of digestion in the stomach.
3. (a) Draw a labelled diagram of ear. **10+10**
(b) Explain the process of hearing.
4. Describe the structure and functions of Mid Brain **20** with the help of suitable diagrams.
5. (a) What is 'Hypertension' ? **3+7+10**
(b) How would you classify Hypertension ?
(c) Describe the various causes of hypertension and its prevention .
6. (a) What is erythropoiesis ? **2+8+10**
(b) Describe the process of erythropoiesis.
(c) Discuss various factors that regulate the process of erythropoiesis.
7. (a) Explain the mechanics of respiration. **10+10**
(b) Describe the interchange of gases within the lungs that takes place during respiration.
8. Write short notes on **any four** of the following :
(a) Cranial Nerves **5+5+5+5**
(b) Theories of ageing
(c) Haemostasis
(d) Grave's Diseases
(e) Disorders of image formation by the human eye
-

No. of Printed Pages : 3

MFN-001

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT) (M.Sc. DFSM)**

Term-End Examination

December, 2018

01022

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 hours

Maximum Marks : 100

Note :

1. Answer **five** questions in all.
2. Question no. 1 is **compulsory**.
3. **All** questions carry equal marks.

1. (a) Give one example for each of the following : $10 \times 1 = 10$

- (i) Female Contraceptives
- (ii) Retinal Cell
- (iii) Exocrine Glands
- (iv) Cranial Nerves
- (v) Ball and Socket Joint
- (vi) Ventricles of the Brain
- (vii) Renal Function Test
- (viii) Types of Refractive Errors
- (ix) Hormone secreted by Anterior Pituitary Gland
- (x) Enzyme of Gastric Juice

- (b) Explain the following in 2 – 3 sentences each : $5 \times 2 = 10$

- (i) Loop of Henle
- (ii) Cardiac Output
- (iii) Tidal Volume
- (iv) Polycythemia
- (v) Cirrhosis of Liver

2. (a) What is Blood Pressure ?

- (b) Explain the factors affecting blood pressure.

- (c) Discuss the various blood pressure regulatory mechanism. $4+6+10$

3. (a) Draw a labelled diagram of the Female Reproductive System.

- (b) Explain the process of menstrual cycle. $10+10$

4. (a) Draw a labelled diagram of the thyroid gland.

- (b) Enlist various functions of the thyroid gland.

- (c) Describe in brief the disorders caused by hypo-secretion or hyper-secretion of thyroid hormones. $8+4+8$

5. (a) Describe the structure of the eye with the help of suitable diagram.
- (b) Explain in brief the various disorders of image formation with the help of suitable diagrams. 10+10
6. (a) Explain the structure of the stomach with the help of suitable diagram.
- (b) Describe the process of digestion of food in the stomach. 10+10
7. Describe the process of urine formation with the help of suitable diagram. 20
8. Write short notes on any **four** of the following : 5+5+5+5
- (a) Anaemia
- (b) Specific Acquired Immunity
- (c) Mechanism of Respiration
- (d) Nerve Cell Morphology
- (e) Liver Function Tests
-

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No. of Printed Pages : 4

MFN-001

**MASTER OF SCIENCE (DIETETICS AND FOOD
SERVICE MANAGEMENT)**

TERM-END EXAMINATION

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 Hours]

[Maximum marks : 100

Note : Attempt five questions in all. Question no.1 is compulsory. All questions carry equal marks.

1. (a) Give one example of each of the following:
[1×10=10]

(i) Vitamin necessary for night vision

(ii) Prokaryotic Cell

(iii) Humour in Ayurvedic Concept

(iv) Agranulocyte

(v) Macrophage

(vi) Phase of Respiration

(vii) Composition of Bile

(viii) Part of Large Intestine

(ix) Hormone Produced by Kidney

(x) Neurotransmitter

(b) Briefly explain the following terms in 2-3 sentences each : [2×5=10]

(i) De-differentiation cells

(ii) Significance of meiosis

(iii) Osmotic pressure

(iv) Function of platelet

(v) NK cells

2. (a) What is the uniqueness of our heart ? [8]

(b) Discuss the nervous control mechanism of heart and blood vessels. [12]

3. (a) What is respiratory centre ? [6]

(b) Describe the chemical control of respiration in detail. [14]

4. (a) What are the G. I. Hormones ? [6]
- (b) How is fat absorbed and utilised in the human body ? [14]
5. (a) How are the molecules transported across the cell membranes ? [6]
- (b) Describe the passive transport mechanism in detail. [14]
6. (a) Make a labelled diagram of Eyeball. [8]
- (b) Discuss the microscopic structure and functions of retina with the help of diagram. [12]
-
7. (a) What do you understand by Non-specific Defence Mechanism ? [3]
- (b) What are the types of internal defence mechanisms ? [5]
- (c) Discuss in detail about the role of leucocytes in internal defence mechanism. [12]

8. Write short notes on **any four** of the following :

[5+5+5+5=20]

- (a) Endoplasmic Reticulum
- (b) Smooth muscle
- (c) Megaloblastic Anaemia
- (d) Classification of antibodies
- (e) Chloride shift
- (f) Digestive function of Pancreas

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No. of Printed Pages : 4

MFN-001

**MASTER OF SCIENCE
(DIETETICS AND FOOD SERVICE MANAGEMENT)**

Term-End Examination, 2019

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 Hours]

[Maximum Marks : 100

Note : Attempt **five** questions in all. **Question No. 1** is **compulsory**. All questions carry **equal** marks.

1. (a) Give one example of each of the following :

[1×10=10]

- (i) Self replicating cytoplasmic organelle of plant
- (ii) Granulocyte
- (iii) Site of erythropoiesis at 3-4 month intrauterine life
- (iv) Large vein supplying blood to right atrium
- (v) Part of pharynx



- (vi) Salivary gland
- (vii) Enzyme of Pancreas
- (viii) Gastrointestinal hormone
- (ix) Lobe of cerebral cortex
- (x) Organism that never die

(b) Briefly explain the following terms in 2-3 sentences each : [2x5=10]

- (i) Undifferentiated cell
- (ii) Classification of animal tissue
- (iii) Sickle cell anemia
- (iv) Bence-Jones protein
- (v) Dead space

2. (a) What is cell cycle ? [4]
- (b) Name the phases of cell cycle. [4]
- (c) Discuss the mitosis process with diagrams. [12]

3. (a) What is acquired immunity ? [2]
- (b) What are the types of acquired immunity ? [2]
- (c) Discuss in detail about the cell mediated immune system. [16]
4. (a) List the organs of Respiratory system. [4]
- (b) Discuss with diagram the structure and functions of Lungs. [8+8]
5. (a) What is the composition and function of gastric juice ? [6+6]
- (b) Discuss the mechanism of secretion of gastric juice. [8]
6. (a) What is the functional unit of Kidney ? [2]
- (b) Discuss its structure with suitable diagram. [6]
- (c) Explain the various functions of the functional unit of Kidney. [12]
7. (a) Draw a labelled diagram of nerve cell. [6]
- (b) How do the nerves communicate ? [6]

- (c) Discuss the process of synaptic transmission. [8]

8. Write short notes on **any four** of the following : [5x4=20]

- (a) Functions of Pituitary gland
- (b) Disorders of image formation of eyes
- (c) Mechanism of Phagocytosis
- (d) Cardiac cycle
- (e) Structure and functions of antibody
- (f) Age related changes in alimentary canal

----- X -----

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No. of Printed Pages : 4

MFN-001

**MASTER OF SCIENCE (DIETETICS
AND FOOD SCIENCE MANAGEMENT)**

M. Sc. (DFSM)

Term-End Examination

June, 2020

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 Hours

Maximum Marks : 100

Note : (i) Attempt five questions in all.

(ii) Question No. 1 is compulsory.

(iii) All questions carry equal marks.

1. (a) Give one example of each of the following :

1 each

(i) Functions of Liver

(ii) Disorders of Thyroid Gland

(iii) Cranial Nerves

**(iv) Functions of Autonomic Nervous
System**

P. T. O.

[2]

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- (v) Types of White Blood Cells
- (vi) Enzymes in Pancreatic Juice
- (vii) Retinol Cells
- (viii) Male Reproductive Organs
- (ix) Abnormal constituents of Urine
- (x) Signs of Vitamin A Deficiency

(b) Briefly explain the following terms in 2-3 sentences each : 2 each

- (i) Innate Immunity
- (ii) Hinge Joint
- (iii) Phagocytosis

(iv) Dialysis

(v) Ketone Bodies

2. (a) What is Blood Pressure ? 4
- (b) Explain various factors affecting the blood pressure. 6
- (c) Describe the various blood pressure regulatory mechanisms. 10
3. (a) What do you understand by the term "Nutrition" ? 4

[3]

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- (b) Describe the classification of the nutrients. 6
- (c) Discuss the relation of various nutritional components with their physiology. 10
4. (a) Describe the structure of eye with the help of suitable diagram. 8
- (b) Discuss the signs and symptoms of Vitamin A deficiency and their corrective measures. 12
5. (a) Describe the structure and functions of Thyroid Gland. 10
- (b) Discuss the various disorders caused by hyposecretion and hypersecretion of thyroid hormones. 10
6. (a) Explain the structure of stomach with the help of suitable diagram(s). 8
- (b) Describe the mechanism of secretion of gastric juice and its composition and functions. 12

[4]

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7. (a) Describe the female reproductive system with the help of suitable diagrams. 12
- (b) Explain the process of menstrual cycle. 8
8. Write short notes on any *four* of the following : 5 each
- (a) Anaemia
 - (b) Endocrine Glands
 - (c) Cataract
 - (d) Kidney Transplant
 - (e) Cardiac Cycle
 - (f) Autonomic Nervous System

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No. of Printed Pages : 3

MFN-001

**MASTER OF SCIENCE (DIETETICS
AND FOOD SERVICE MANAGEMENT)**

M. SC. (DFSM)

Term-End Examination

December, 2020

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 Hours

Maximum Marks : 100

Note : *Attempt five questions in all. Question No. 1 is compulsory. All questions carry equal marks.*

1. (a) Give **one** example of each of the following :

1×10=10

- (i) Renal function test
- (ii) Modern methods of female contraception
- (iii) Blood cells
- (iv) Disorders of Image Formation by the eye
- (v) Disorders related to Pulse Rate
- (vi) Parts of Mid Brain
- (vii) Signs of Vitamin A deficiency

- (viii) Types of Joints
- (ix) Types of Anaemia
- (x) Spinal Nerves

(b) Briefly explain the following terms in **2–3** sentences each : 2×5=10

- (i) Salivary Glands
- (ii) Bile Juice
- (iii) Prostate Gland
- (iv) Leucocytes
- (v) Signs of inflammation

2. Describe the structure and functions of Central Nervous System (CNS) with the help of suitable diagrams. 20

3. Describe the structure and functions of the heart with suitable diagrams. 20

4. (a) Describe the structure of Salivary Glands. 8

(b) Explain the process of digestion of food in our body. 12

5. (a) Draw a labelled diagram of female reproductive system. 8

(b) Describe the growth and development of foetus up to 32 weeks of gestation. 12

[3]

6. (a) With the help of diagrams, describe various types of tissues. 10
- (b) Discuss various theories of ageing. 10
7. (a) Describe the structure of eye with the help of suitable labelled diagram. 8
- (b) Discuss various types of refractive errors. How can they be corrected ? 12
8. Write short notes on any *four* of the following : 5 each
- (a) Liver Function Tests
 - (b) Dialysis
 - (c) Functions of lungs
 - (d) Endocrine Glands
 - (e) Middle Ear
 - (f) Abnormal Constituents of urine