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2405 ( 15/06 )

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**ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009**

**PHYSIOLOGY  
SEMESTER - 2**



Time : 3 Hours ]

[ Full Marks : 70

**GROUP - A**

**( Multiple Choice Type Questions )**

1. Choose the correct alternatives for any *ten* of the following : 10 ∞ 1 = 10

i) Uncomfortable or distressed breathing is known as

- |            |              |                          |
|------------|--------------|--------------------------|
| a) Apnoea  | b) Asphyxia  |                          |
| c) Hypoxia | d) Dyspnoea. | <input type="checkbox"/> |

ii) In human, RBC are flattened, circular, biconcave and

- |                   |                   |                          |
|-------------------|-------------------|--------------------------|
| a) nucleated      | b) non-nucleated  |                          |
| c) multinucleated | d) none of these. | <input type="checkbox"/> |

iii) Erythrocyte formation in human being starts at

- |                                              |                                               |                          |
|----------------------------------------------|-----------------------------------------------|--------------------------|
| a) 1 <sup>st</sup> week of intrauterine life | b) 3 <sup>rd</sup> week of intrauterine life  |                          |
| c) 5 <sup>th</sup> week of intrauterine life | d) 7 <sup>th</sup> week of intrauterine life. | <input type="checkbox"/> |

iv) A person with diabetes mellitus does not secrete enough

- |                |                   |                          |
|----------------|-------------------|--------------------------|
| a) sugars      | b) insulin        |                          |
| c) epinephrine | d) none of these. | <input type="checkbox"/> |

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v) Melatonin is a hormone secreted by

- a) adrenal gland
- b) pineal body
- c) thyroid
- d) none of these.



vi) Cushing syndrome is due to

- a) hypersecretion of glucocorticoids
- b) hyposecretion of glucocorticoids
- c) hypersecretion of mineralocorticoids
- d) none of these.

vii) Prolactin release is lowered by

- a) Dopamine
- b) Histamine
- c) Ach
- d) Atropine.

viii) Hemolytic disease in newborn is associated with

- a) ABO blood group
- b) Rh blood group
- c) MN blood group
- d) All of these.

ix) Which statement is not true about "tidal volume" ?

- a) Volume of air in one breath is called tidal volume
- b) Tidal volume is supposed to be 500 ml
- c) Tidal volume can be measured by spirometer
- d) Minute volume does not depend upon tidal volume.



x) Exchange of gases in alveoli of lung takes place by

- a) Passive transport
- b) Active transport
- c) Osmosis
- d) All of these.



xi) Impulse of heartbeat is generated in

- a) SA node
- b) AV node
- c) Bundle of His
- d) Medulla oblongata.

xii) Goitre is produced by the deficiency of

- a) zinc
- b) iodine
- c) fluorine
- d) iron.

xiii) The ion with lowest intracellular concentration is

- a)  $\text{Na}^+$
- b)  $\text{HCO}_3^-$
- c)  $\text{Ca}^{2+}$
- d)  $\text{Mg}^{2+}$ .

**GROUP – B**

**( Short Answer Type Questions )**

Write short notes on any *three* of the following.

3 ∞ 5 = 15

2. Lung volumes.
3. Micturition.
4. ESR.
5. ECG and its importance.
6. Cushing's syndrome.

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**GROUP - C**

**( Long Answer Type Questions )**

Answer any *three* of the following.



3 × 15 = 45

7. Explain in detail about the mechanism of coagulation of blood. 3 + 7 + 5
8. Discuss about the transport and delivery of O<sub>2</sub> to the tissues. Explain the principal principles governing the respiratory exchange.
9. What is Haemopoiesis ? Write about all the stages in the development of blood cells. What do you mean by ABO system ? 3 + 7 + 5
10. Discuss briefly on properties of cardiac muscles.
11. What is cardiac cycle ? Write about various phases of cardiac cycle. 5 + 10

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END