**IMN Blueprint 2025 (40 marks)**

| **Topic** |  **Metabolism 24 marks** **MCQs and /or SAQs** |
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| **I-Biochemistry Department** |
| **Bioenergetics** | **2** |
| **Carbohydrates metabolism** | **3** |
| **Lipid metabolism** | **3** |
| **Protein metabolism** | **8** |
| **Nucleic acid metabolism** | **6** |
| **Vitamins Metabolism** | **2** |
| **II-Community Department** | **MCQs 13 marks** | **SAQ (3 Marks)** |
| **Basic nutrition** | **2** |  |
| **Vitamins &minerals Antioxidants** | **2** |  |
| **Malnutrition** | **2** |  |
| **Nutrition throughout the life cycle** | **3** | **3** |
| **Balanced diet & obesity** | **4** |  |

Pathways

HMP , glucose 6 P to ribose 5P

Uronic acid pathway

Galactose to glucose 6 P

Fructose to glycerldehyde 3 P

Beta oxidation of palmitic acid / calculate energy

Ketogenesis pathway

Ketolysis pathway

Urea synthesis

Creatine synthesis

Tyrosine to epinephrine/ adrenaline

Tryptophan to melatonin

Vitamin A activation / rhodopsin cycle

Vitamin D3 biosynthesis

Sources of Different atoms of purine

Regulation of purine biosynthesis / activators and inhibitors