How to Approach Multiple Choice Questions

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The introduction of multiple choice questions (MCQs) as a tool for the evaluation has evoked a mixed response from both the teachers and students. The purpose has been to increase the objectivity in the existing system of evaluation. This has made the students read in-depth the various topics and has prompted the teachers to approach the topics in a holistic manner for framing the questions. Overall, it has been a brain-stimulating task for both the teachers and the students.

A student should have a broad-based knowledge of Anatomy, which implies an ability to register and recall a large number of facts to answer MCQs effectively. This recall has to be done in a short span of time to enable effective answering of MCQs. This would appear to be a formidable task for the uninitiated. But there are methods of overcoming it.

What is essentially required is a system of "net-working" within the student's brain. A lot of facts in Anatomy have a tendency to repeat, have a tendency to overlap. One should effectively link this information and use it advantageously.

Consider a student, while studying muscles, finds that the action of two muscles are similar at a given joint then he/she should corroborate and register that fact in a reciprocal or reverse way. For example, Biceps brachii produces flexion at the elbow joint. Brachialis also produces flexion at the elbow joint. The student should register these facts after reversibly corroborating as "Flexors at the elbow joint include Biceps brachii and Brachialis".

Likewise, a student may study and note that the nerve supply of Brachialis is by musculocutaneous nerve. However if he/she is asked about the muscles supplied by musculocutaneous nerve, there is usually some difficulty in recalling the above fact. Herein lies the importance of linking information. There are very many facts like these in Anatomy, which when mulled over back and forth can be remembered better by association. If a student develops this ability of linking information and association of thoughts, anatomical facts can be remembered better and used effectively to answer MCQs.

To know the subject of Anatomy and to be able to answer MCQs correctly are not one and the same. Knowledge can be acquired by reading books but to attempt MCQs correctly, practice and familiarity with the various types of MCQs is a must. There are different types of MCQs. Some of the commonly used types of MCQs are Single best response, True/False independent and Relationship-Analysis.

A Single Best Response Type of MCQ consists of a base (*stem*), followed by a series of alternatives or options, out of which one is the answer (*key*) and the rest are called *distractors*. There are four options instead of five keeping in mind the style of the majority of current MCQ examinations. A student should read the directions carefully and follow them accordingly. (S)he should read the four alternatives and select the *most appropriate* answer.

There are four subtypes of single best response MCQ depending on the nature of the stem:

Simple completion type

Question type

Negative form type

Case history type

Q. One of the muscles forming the floor of the femoral triangle is
A.   Vastus lateralis
B.   Adductor longus
C.   Tensor fascia lata
D.   Sartorius

Q. Inversion & Eversion of foot occur at which joint?
A.   Ankle
B.   Subtalar
C.   Inferior tibiofibular
D.   Tarso metatarsal

Q. Structures forming the boundaries of epiploic foramen include all of the following **EXCEPT**

A.   Caudate lobe of liver
B.   Hepatic vein
C.   Free border of lesser omentum
D.   Inferior Vena Cava

Q. A 35 year old male who presented with fracture of the shaft of right humerus, developed inability to extend his right wrist and also had a loss of sensation over the back of right forearm and lateral half of dorsum of right hand. The most likely nerve injured would be

A.   Musculocutaneous

B.   Median

C.   Radial

D.   Ulnar

In **True/False independent type** each component is either true or false and thus easy to answer.

Q. Pertaining to liver
A.   It is covered by a connective tissue capsule throughout except in bare areas.
B.   The main bare area of the liver is an important site of porta-systemic anastomosis.
C.   It develops from foregut.
D.   Portal lobule is centered on central veins.

In **Relationship – Analysis type** the two statements should be read carefully.

Directions:

Each question given below consists of two statements:

Statement 1 (Assertion) and statement 2 (Reason) connected by the term "because". Choose the correct answer using the code given below:-

A. If **both statements are true** and the statement 2 is a **correct explanation** of the statement 1.
B.   If **both statements are true** but the statement 2 is **not a correct explanation** of the statement 1.
C. If the **statement 1 is true** and the **statement 2 is false**.
D. If the **statement 1 is false** and the **statement 2 is true**.
E. If **both statements are false**.

Q 1 Pain of the hip joint may be referred to the knee joint
    BECAUSE
  2 Both hip and knee joints are supplied by obturator nerve.

Having now seen the types of MCQs, let us see what materials are required for preparation to answer them:

• An outline/synopsis to quickly review the whole topic.

• A good standard textbook for explanation of complex topics.

What should be your attitude?

Keep a positive attitude. Aim to move towards success rather than away from failure. Do not *memorize* too much information. Remember, MCQs require fine distinctions between correct and nearly correct statements, therefore try to *learn and understand* less material and rely on *applying* the knowledge. Relying on memorized material causes anxiety; anxiety causes confusion; confusion decreases performance.

While preparing for the examinations:

• Study the entire topic, not merely for the examinations. Some topics in anatomy may not or probably *cannot* be asked for the examinations — but might be required for future clinical application. This is probably the last time you have the necessary materials, opportunity and the facility to have a sound knowledge of the basic science.

• Attempt to understand the application of the knowledge — this allows long-term retention.

• Ask yourself how *you* might construct a question on the topic(s) you are presently studying.

• Use practice examinations intelligently. Analyze *why* particular alternatives were incorrect. Also try re-framing the questions in different formats to make the other alternatives as the correct answers. You will be amazed to know how soon you gain a deeper insight to those topics when you go through such exercise.

During the examinations:

• Use the time optimally. Each MCQ test has has a specific number of questions and a specific time period to solve them. If you finish too early, you were going too fast.

- Read the directions carefully and answer accordingly. The answers are usually checked by a computer — cancellations are not permitted: the computer cannot interpret cancelled and rewritten answers and will treat them as incorrect.

- Read all alternatives carefully and make rough work (if necessary) for eliminating the incorrect answers in the question paper itself.

- If there are no negative markings, attempt all the questions. Be honest with yourself. If you do not know a particular answer, eliminate as many choices as possible and then choose reasonably. Blindly tossing a coin to answer MCQs should not be the method adopted. Know your subject and get the joy of answering.

- Do not expect to know everything — you are giving a bachelor's exams and not a master's.

Keep cool and you will succeed

"Examinations are formidable even to the best prepared, for the greatest fool may ask more than the wisest man can answer"

Charles Caleb Colton