# The following templates show the necessary elements for questions. Cut and paste and replace the blue text to generate your own questions.

## **Standard single best answer multiple choice template, 1 out of 5:**

**Stem:**

Q 3. Prince, a 7-year-old boy from sub-Saharan Africa is brought to your attention for joint pain and fever. The boy says that the knee has been hurting for about 5 days. Fever has fluctuated between 37.5°C and 38°C. He was given a 3-day course of antibiotics about 2 weeks ago for pharyngitis. On physical examination Prince is found to refuse to bear weight on the right leg. The skin above the knee and up to the distal third of the thigh is mildly reddish and warm. There is diffuse, though moderate, swelling. The child complains of severe pain upon pressure a few centimetres above the patella.

**Question:**

What is your first diagnostic hypothesis? **(1 correct answer)**

**5 similar, plausible options of which one is correct (the single best answer)**

1. Juvenile idiopathic arthritis
2. Septic arthritis
3. Post-streptococcal reactive arthritis
4. Osteomyelitis
5. Malignancy

**Clear statement of 1 correct answer**

**Correct** 4 Osteomyelitis

**Feedback for candidates explaining why each question is, or is not correct in this case**

**Feedback:**

1: Wrong answer because Juvenile idiopathic arthritis is unlikely owing to the marked intensity of pain.

2: Wrong answer because…

3: Wrong answer because The history of antecedent pharyngitis may lead to consider PSRA, but the inflammatory process appears to be localized in the distal femur rather than in the knee joint.

4 Correct answer because Although fever and biochemical indicators of inflammation may be consistent the clinical presentation is typical for osteomyelitis.

5 Wrong answer because Malignancy is not the first option, but should be accurately ruled out if laboratory and radiological finding are not consistent with osteomyelitis

**Total number of correct answers (marks) available so far: \_ out of 20**

## **Standard single best answer multiple choice template, 1 out of 5 picture stimulus:**

**Question number:**

**Stem:**

An 80-year-old diabetic lady presents with an acutely swollen and painful knee. She is pyrexic (temp 38 degrees Celsius), has a CRP of 168 and WCC 13. The knee XR is shown below

**Question:**

Which one of the following diagnoses must be **excluded? (1 correct answer)**

**5 similar, plausible options of which one is correct (the single best answer)**

1. Acute gout
2. RA
3. Acute calcium pyrophosphate crystal synovitis
4. OA
5. Septic arthritis

**Clear statement of 1 correct answer**

Correct 5 septic arthritis

**Feedback for candidates explaining why each question is, or is not correct in this case**

1. Wrong answer because Although fever and biochemical indicators of inflammation may be consistent with gout, the chondrocalcinosis favours an alternative diagnosis
2. Wrong answer because RA tends to be more symmetrical, polyarticular and of insidious onset, with peak onset between the ages of 50 and 75. Occasionally monoarthritis in RA may herald a polyarticular onset.
3. Wrong answer because Whilst CPPD not uncommonly presents with high CRP and fever, particularly in the elderly, septic arthritis must be excluded
4. Wrong answer because OA of a single joint is usually milder in presentation and investigations point away from significant inflammatory activity
5. Correct answer because Infection must be considered as differential diagnosis in any acute monoarthritis, especially in conjunction with fever and high inflammatory markers. Infection and monoarthritis due to another cause can co-exist.

**Total number of correct answers (correct answers) available so far: \_ out of \_**

## **Standard two best answers multiple choice template, 2 out of 7:**

**Stem:**

Janet has suffered from rheumatoid arthritis (RA) for many years. She also suffers from psychological distress. She was therefore referred to a psychologist for psychological assessment. One of the tests performed by the psychologist was a personality test. One of the conclusions in the test report is that Janet’s personality is characterized by a high degree of neuroticism (proneness to negative emotions) and by a self-sacrificing defence style.

**Question number:**

Select the two statements that are correct. **(2 correct answers)**

**7 similar, plausible options of which two are correct (2 answers)**

1. Janet’s personality, characterized by a high degree of neuroticism and by a self- sacrificing defence style, is very typical for RA patients and may be an important aetiological factor for her RA

2. Neuroticism has been indicated to negatively influence the perception of symptoms and wellbeing in RA.

3. Patients with a self- sacrificing defence style such as Janet may be particularly vulnerable to experience more symptoms.

4. Sixty years ago it was quite uncommon to associate RA with personality factors. In later years the emphasis on personality factors have increased.

5. There is solid empirical evidence for the “Arthritis Personality” concept.

6. Low extraversion is more characteristic for patients with RA than high neuroticism.

7. High hostility is the more characteristic personality characteristic of patients with RA.

**Clear statement of 2 correct answers**

**Correct answers:**

2. Neuroticism has been indicated to negatively influence the perception of symptoms and wellbeing in RA.

3. Patients with a self- sacrificing defence style such as Janet may be particularly vulnerable to experience more symptoms.

**Feedback:**

1. Wrong answer. There is no evidence for personality factors in the aetiology of RA.
2. Correct answer. Patients with high neuroticism scores may report more discomfort associated with symptoms than other patients.
3. Correct answer. Patients with a self- sacrificing defence style report more severe symptoms.
4. Wrong answer. RA was by some clinicians, such as Franz Alexander, characterized as a psychosomatic disease in the 1950s. The emphasis on personality as an etiological factor in RA has decreased over the years, but there is an increased evidence of the significance of psychological factors in how well patients cope with the disease.
5. The “Arthritis Personality” concept was popular in the 1950s and 60s, but the concept has limited empirical support.
6. Wrong answer. Personality of patients with RA is on average comparable to personality of people in the general population.
7. Wrong answer. Personality of patients with RA is on average comparable to personality of people in the general population.

## **Extended Matching Question (EMQ) template:**

**Stem: Clinical cases integral to the question.**

**Invite matching with diagnoses/tests or treatments**

**Question Number:**

**Stem:**

Match the clinical histories of the patients (Cases A, B and C) with the diagnosis that they suggest (1-7). Although none of the histories permits a definite diagnosis and other possible hypotheses may need to be ruled out, they include sufficient information to formulate the most likely specific diagnosis.

**(3 correct answers)**

**At least 7 similar, plausible options (7-9 options required)**

Symptoms:

1. Systemic juvenile idiopathic arthritis
2. Septic arthritis
3. Lyme disease
4. Acute osteomyelitis
5. Subacute osteomyelitis
6. Oligoarticular juvenile idiopathic arthritis
7. Acute rheumatic fever

**Clinical Cases A, B, C (D, E - 5 Cases maximum)**

**Case A:**

A 6-year-old boy has arthritis and fever (38°C) of recent onset. Three days before the visit he developed pain and swelling of the left knee and was given aspirin by his grandmother. Joint pain resolved quickly. The day before the visit he experienced swelling of the right elbow and the morning of the visit day the ankle became swollen and tender, leading to limping.

**Clear statement of correct pairing**

**Correct Pair:** Case A and symptom 7

**Feedback:** Key differentiating reasons here.

**Case B**

A 15-year-old boy developed pain and mild swelling just below the knee. Pain is severe and has been lasting for about two weeks (he cannot indicate the date of onset). Pain sometimes wakes him up during the night. He has low-grade fever. A scar is detectable on the calf in the same leg and the boy recalls that it resulted from a wound caused by a fall while biking 2 months ago.

**Clear statement of correct pairing**

**Correct Pair:** Case B and symptom 5

**Feedback:** Key differentiating reasons here.

**Case C**

A 3-year-old girl developed swelling in the left knee about 1 month before. Joint swelling was discovered by the mother and was attributed to a recent minor trauma. Joint pain was mild. The girl was referred to an orthopaedic surgeon, who diagnosed a traumatic sprain and immobilized the left limb in a plaster cast. When the cast was removed, the knee had the same degree of swelling as before. In the meantime, the girl had started to complain of pain on motion of the IV metacarpophalangeal joint of the right hand

**Clear statement of correct pairing**

**Correct Pair:** Case C and symptom 6

**Feedback:** Key differentiating reasons here.

**Total number of correct answers (correct answers) available so far: \_ out of 20**