

Q1 (a) Define low back pain.	
Answer	Total marks
<p>Award 2 marks for the following definition:</p> <ul style="list-style-type: none">Low back pain can be described as pain, tension or stiffness localised between the inferior gluteal folds and the 12th rib with or without leg pain (sciatica)	2



Q2 (a) Identify the timeframe associated with chronic low back pain.	
Answer	Total marks
Award 1 mark for identifying the following: <ul style="list-style-type: none">Chronic Low back pain is low back pain that has persisted for 12 weeks or more	1
Award 1 mark for an appropriate answer not listed for Pass above.	



3 (a) Describe what is meant by non-specific low back pain.	
Answer	Total marks
Award 1 mark for the following description : Non-specific low back pain is back pain of unknown cause or without a specific pathology	1
Award 1 mark for an appropriate answer not listed for Pass above.	



4 (a) Outline the difference between nociceptive pain and radicular pain.

Answer	Total marks
Award 2 marks for outlining that nociceptive pain is caused by harmful stimuli being detected by specialised pain receptors called nociceptors Award 2 marks for outlining that radicular pain is pain associated with compression of or damage to a nerve root .	4
Accept accurate descriptions not highlighted above.	



Panjabi (1992) suggested that there are three subsystems that work and interact together to provide stability to the spine.

5 (a) Outline the **three** components of the spinal stabilisation system.

Answer	Total marks
<p>Award 1 mark each for outlining the three components of Panjabi's stabilisation system</p> <ul style="list-style-type: none"> • Passive system – this system is composed of non-contractile structures that provide passive support. These include, ligaments, IV discs etc. • Active system – This system includes the support provided from the muscular system and muscles that contribute to stabilisation of the spine, these include lumbar multifidus, transversus abdominus etc • Neural system – this system is composed of the sensory and motor components of the nervous system that respond to and affect changes in the spine to maintain stability. 	3
<p>Award marks for appropriate descriptions worded according to the above classification.</p>	



6 (a) Identify three signs and /or symptoms of nerve root/radicular pain.

Answer	Total marks
<p>Award 1 mark for identification of 3 of the following:</p> <ul style="list-style-type: none">• Low back pain with unilateral leg pain• Sharp shooting pain• Pain radiating to the leg or more distal to the spine• Numbness and paraesthesia corresponding to dermatome distribution• Muscle weakness corresponding to myotome distribution• localised neural pain• positive for neural tension tests (e.g. SLR test)	3
Award marks for other signs or symptoms not identified above	



7 (a) Identify two modifiable and two non-modifiable risk factors for low back pain.	
Answer	Total marks
<p>Award 1 mark each for two modifiable and two non-modifiable risk factors below:</p> <p>Non- modifiable</p> <ul style="list-style-type: none"> • age • gender • number of children • previous episodes of LBP <p>Modifiable</p> <ul style="list-style-type: none"> • activity/sport type • smoking • obesity • alcohol consumption • work/job type • stress • depression • sedentary lifestyle 	4
Award marks for appropriate answers not listed above.	



8 (a) Describe what is meant by the 'biopsychosocial' model for low back pain.

Answer	Total marks
<ul style="list-style-type: none">The biopsychosocial model for low back pain attempts to understand LBP through the influence and interaction of the biological, social and psychological influences on the development and maintenance of LBP.	3



9 (a) Explain how fear avoidance contributes to the development of chronic low back pain.

Answer	Total marks
<p>Award 3 marks for the following description:</p> <p>Fear avoidance is a behavioural pattern characterised by a fear of movement or the avoidance of activity through the belief that movement or activity will exacerbate the symptoms / condition of LBP. While this behaviour may be useful in the early stages of LBP continued withdrawal from activity will lead to deconditioning, abnormal pain adaptation postures which can lead to further damage and pain</p>	6



10 (a) Identify four spinal pathologies that can contribute to low back pain.

Answer	Total marks
<p>Award 1 mark each for identification of four of the following:</p> <ul style="list-style-type: none">• Disc herniation• Spondylolysis• Spondylolisthesis• Spinal stenosis• Facet joint syndrome• Spinal fractures• Ankylosing spondylitis• Severe scoliosis• Cauda equina syndrome	4
Award marks for other correct pathologies	



11 (a) Identify three social factors that can contribute to the development and maintenance of chronic low back pain.

Answer	Total marks
<p>Award 1 mark each for any three of the following:</p> <ul style="list-style-type: none">• Occupation / job satisfaction• Socioeconomic status• Family or spouse dynamics• Health inequalities• Education	3
Award marks for any correct examples not identified above	



12 Outline three epidemiological factors associated with low back pain.	
Answer	Total marks
<p>Award 1 mark each for identifying any two of the following epidemiological factors (up to 2 marks):</p> <ul style="list-style-type: none"> • LBP is a condition that will effect most people at some point in their lives • LBP is ranked as one of the greatest contributors to global disability • The prevalence of back pain increases with age and activity limitation • The disability of LBP is associated with increased societal burden • The disability associated with LBP is greater in working age groups <p>Award 1 extra mark for any additional referenced epidemiological factor</p> <ul style="list-style-type: none"> • The lifetime prevalence of LBP is said to be up to 80% (Balague 2012) (can use other figures if referenced) • 4/5 people will suffer back pain in their life (Gray 2000) • LBP is more prevalent more prevalent on 40-70 age group (Hoy 2010) • The global burden of LBP is said to get worse for low and middle income and low income countries (Hartvigsen 2018) • The mean prevalence of LBP is more common in women than in men (Hartvigsen 2018). 	3
Award marks for other accurately referenced data	



13 Identify three red flags associated a serious spinal pathology or emergency medical referral in a client with low back pain.	
Answer	Total marks
<p>Award 1 mark each for identifying 3 red flags (up to 3 marks):</p> <ul style="list-style-type: none"> • Onset of pain in the under 20 age group • Recent history of violent trauma • Saddle anaesthesia • Difficulty with urination • Widespread motor weakness in the legs • Past medical history of a malignant tumour • Unexplained weight loss • widespread neurological symptoms • Faecal incontinence • Prolonged use of corticosteroids 	3
Award marks for other correct answers	



The NICE guidelines (2016) covers assessing and managing low back pain and sciatica in people aged 16 and over. It outlines physical, psychological, pharmacological and surgical treatments to help people manage their low back pain and sciatica in their daily life

14 Outline three non-invasive NICE treatment recommendations low back pain and sciatica.

Answer	Total marks
<p>Award 2 marks each for each interventions (up to 6 marks):</p> <ul style="list-style-type: none"> • Self-management - Provide people with advice and information, tailored to their needs and capabilities, to help them self-manage their low back pain with or without sciatica, at all steps of the treatment pathway. Include: information on the nature of low back pain and sciatica, encouragement to continue with normal activities. • Exercise - Consider a group exercise programme (biomechanical, aerobic, mind–body or a combination of approaches) within the NHS for people with a specific episode or flare-up of low back pain with or without sciatica. Take people's specific needs, preferences and capabilities into account when choosing the type of exercise. • Manual Therapies - Consider manual therapy (spinal manipulation, mobilisation or soft tissue techniques such as massage) for managing low back pain with or without sciatica, but only as part of a treatment package including exercise, with or without psychological therapy. • Psychological therapies - Consider psychological therapies using a cognitive behavioural approach for managing low back pain with or without sciatica but only as part of a treatment package including exercise, with or without manual therapy (spinal manipulation, mobilisation or soft tissue techniques such as massage). 	6



<ul style="list-style-type: none">• Combined physical and psychological therapies - Consider a combined physical and psychological programme, incorporating a cognitive behavioural approach (preferably in a group context that takes into account a person's specific needs and capabilities), for people with persistent low back pain or sciatica:<ul style="list-style-type: none">○ when they have significant psychosocial obstacles to recovery (for example, avoiding normal activities based on inappropriate beliefs about their condition) or○ when previous treatments have not been effective.• Pharmacological interventions - Consider oral non-steroidal anti-inflammatory drugs (NSAIDs) for managing low back pain, taking into account potential differences in gastrointestinal, liver and cardio-renal toxicity, and the person's risk factors, including age.	
Award marks for other correct examples	

