FCS(SA) Intermediate Examination Blueprint for Paper 1: Principles of Surgery in General

UPDATE:03 SEP 2020

Impact: Implication to life and organs if not recognized and managed appropriately.

Impact	Score
Immediately life threatening	4
Life threatening (delayed)	3
Organ or limb threatening	2
Trivial	1

Frequency: How often is a practicing likely to encounter it?

Frequency of occurrence	Score
Common (daily to weekly)	3
Frequent (weeks to 3 months)	2
Rare (more than 3months)	1

Impact factor: Impact x Frequency

Grading of Level of Competence: 1–4

Level of competence	Descriptor
Level 1	Diagnose and refer
Level 2	Diagnose, stabilize and refer
Level 3	Diagnose, stabilize, institute emergency management and refer
Level 4	Diagnose and institute definitive management

Examination Formats

Question Item	Description	Percentage Weighting
SBA MCQs	Total of 120 questions	

››Content Area	Topics	Learning Objectives	Level of Competence	Competencies	Weighting in Percentage in Paper 1 SBA MCQs
1. Support of oxygenation and ventilation (Impact Factor =12)	***a) Anatomy and practical principles involved in airway management*** ***b) Lung physiology and pathophysiology applicable to mechanical ventilation*** ***c) Physiology behind oxygenation in a ventilated patient*** ***d) Principles behind practical provision of mechanical ventilation*** ***e) Mechanism and management of pulmonary aspiration syndromes and infections*** ***f) Pathophysiology and management of acute lung injury and ARDS*** ***g) Pathophysiology and management of ventilation induced lung injury*** ***h) Diagnosis and management of acute upper airway obstruction***	***See curriculum***	***a) Level 4*** ***b) Level 4*** ***c) Level 4*** ***d) Level 3*** ***e) Level 3*** ***f) Level 3*** ***g) Level 3*** ***h) Level 4***	See syllabus	***12%***
2. Haemodynamic and support of the circulation (Impact Factor = 12)	***a) Classification, pathophysiology, clinical presentation and treatment of shock*** ***b) Pharmacology and practical use of cardiovascular drugs in critical illness*** ***c) Pathophysiology and principles involved in management of acute cardiac disturbances*** ***d) Principles, application, interpretation and management of complications associated with devices used for haemodynamic monitoring*** ***e) Fluids and electrolyte management***	***See curriculum***	***a) Level 4*** ***b) Level 3*** ***c) Level 3*** ***d) Level 3***	***See syllabus***	***10%***
3. Trauma (Impact Factor = 12)	***a) Transportation of a critically injured patient*** ***b) Principles of resuscitation and management of polytrauma including damage control***	***See curriculum***	***a) Level 3*** ***b) Level 4***	***See syllabus***	***12%***

	c) *Evaluation and management of traumatic brain injuryespecially secondary brain injury* d) *Rational use of blood and blood products* e) *Pathophysiology, investigations and management of haemostatic abnormalities in trauma(ROTEM, TEG, clotting profiles, Differential Dx of bleeding disorders)* f) *Pathophysiology, diagnosis and management of abdominal compartment syndrome* g) *Brain death test* h) *Bite wounds (snake, animals, insects, ticks) and envenomation*		c) *Level 3* d) *Level 4* e) *Level 4* f) *Level 4* g) *Level 4* h) *Level 4*		
4. Inflammatory syndromes including organ dysfunction syndromes (Impact Factor = 12)	a) *Definition, pathophysiology and management of inflammatory syndromes* b) *Management of sepsis, severe sepsis and septic shock* c) *Definition, manifestations and implications of multiple organ dysfunction syndrome* d) *Risk Scoring Systems in sepsis and MODS complications* e) *Stress ulcer prophylaxis* f) *Presentation, diagnostic investigations and management of pseudomembranous colitis*	*See curriculum*	a) *Level 3* b) *Level 4* c) *Level 3* d) *Level 3* e) *Level 4* f) *Level 3*	*See syllabus*	*6%*
5. Organ dysfunction [(specific) (Impact Factor = 8)	a) *Risk factors, manifestations, classification, complications and management of acute cardiac syndromes.* a) *Risk factors, manifestations, classification, complications and management of acute respiratory failure.* a) *Risk factors, manifestations, classification, complications and management of metabolic encephalopathy.* a) *Risk factors, manifestations, classification, complications and management of acute liver failure.* a) *Risk factors, manifestations, classification, complications and management of acute kidney injury.*		a) *Level 3* b) *Level 4* c) *Level 2* d) *Level 3* e) *Level 3* f) *Level 3*	*See syllabus*	*10%*

	a) Risk factors, manifestations, classification, complications and management of gut failure. *a) Risk factors, manifestations, classification, complications and management of critical care myopathy*		*g) Level 2*		
6. Endocrine and metabolic aspects of critical illness (Impact Factor = 9)	*a) Diagnosis and management of acute complications of diabetes mellitus* *b) Risk factors, presentation and management of thyrotoxic crisis, hypercalcaemic crisis, hypocalcaemia, hypertensive crisis, adrenal insufficiency and abnormalities of ADH secretion* *c) Definition, causes, presentation, classification and management of electrolyte derangements, including acid-base disturbances* *d) Predisposing factors, pathophysiology, presentation, complications and management of hypothermia* *e) Presentation and management of malignant hyperthermia*	*See curriculum*	*a) Level 4* *b) Level 3* *c) Level 4* *d) Level 4* *e) Level 3*	*See syllabus*	*10%*
7. Nutritional aspects of critical illness(Impact Factor = 9)	*a) Assessment of nutritional status* *b) Indications, access and complications of enteral nutrition. The rationale of early enteral nutrition.* *c) Indications and complications of parenteral nutrition* *d) Indications, mechanism of action and side effects of various types of immunonutrients (pharmaconutrients)* *e) Risk factors, presentation, management and complications of re-feeding syndromes* *f) Nutritional intervention in acute pancreatitis, patients with cancer and organ dysfunction*	*See curriculum*	*a) Level 3* *b) Level 3* *c) Level 3* *d) Level 3* *e) Level 2* *f) Level 3*	*See syllabus*	*08%*
8. Peri-operative care (Impact Factor = 12)	*a) Cardiovascular risk assessment and stratification* *b) Respiratory system risk assessment and stratification* *c) Assessment and grading of renal function an* *d) Assessment and grading of hepatic functionImplications and management of jaundice* *e) Assessment of haemostatic function including VTE prophylaxis and treatment*	*See curriculum*	*a) Level 3* *b) Level 3* *c) Level 3* *d) Level 3* *e) Level 3* *f) Level 3*	*See syllabus*	*14%*

	f) Assessment of patients with common endocrine problems *g) Relevance and application of Enhancing Recovery after Surgery Program (ERAS)* *h) Principles of antiseptic techniques* *i) Prevention of medico-legal hazards in theatre* *j) How to obtain a valid informed consent* *k) Management of pain, sedation, delirium, anxiety, depression, withdrawl, including PCA and epidurals and local blocks* *l) Surgical skills in ICU: Cricothyroidotomy, Tracheostomy techniques, Intercostal drains, Wound management, VAC therapy, Enterocutaneous and – atmospheric fistulae, Relook laparotomy, Damage control, CVP placement, Vascath placement, etc*		*g) Level 4* *h) Level 4* *i) Level 4* *j) Level 4* *k) Level 3* *l) Level 4*		
9. Burns (Impact Factor = 6)	*a) Classification* *b) Resuscitation* *c) Burn wound managementincluding surgical techniques for debridement and principles of wound healing* *d) Inhalation injury* *e) Nutritional supporting burns* *f) Complications: prevention and management*	*See curriculum*	*a) Level 4* *b) Level 4* *c) Level 4* *d) Level 3* *e) Level 3* *f) Level 3*	*See syllabus*	*4%*
10. HIV/AIDS (Impact Factor = 6)	**a) Universal precautions** **b) HIV Testing** **And Staging of HIV Disease** **c) Surgically relevant infections in HIV and AIDS** **d) Organ-systems manifestations of HIV/AIDS** e) Peri-operative and Intensive care of HIV/AIDS patient	*See curriculum*	*a) Level 4* *b) Level 3* *c) Level 2* *d) Level 2* *e) Level 3*	See syllabus	4%
11. Infections and antimicrobials	*a) Understanding the concept of rational use of antimicrobials including antibiotic stewardship* *b) Pharmacology i.e. pharmacokinetics and pharmacodynamics of antimicrobials* *c) Mechanisms of antimicrobial resistance*	*See curriculum*	*a) Level 4* *b) Level 3* *c) Level 2* *d) Level 4*	*See syllabus*	*7%*

	d) Principles of antiseptic techniques and prevention of infection				
12. Research and ethics	*a) Evidence based practice* *b) Research methodology* *c) Interpretation of research findings (descriptive statistics)* *d) How to review a manuscriptand evaluate an article* *e) Ethics*		*a) Level 3* *b) Level 3* *c) Level 2* *d) Level 2* *e) Level 3*	*See syllabus*	*3%*
TOTAL					*100%*