

**Higher Specialist Diploma - Portfolio Essay Titles for Submission in 2022**

**Regulations**

* Two essays must be included in the portfolio as evidence of experiential learning. If when you applied to undertake the HSD, you indicated you wanted to submit in 2022 you must choose any two essay titles from either the 2021 or 2022 list of essay titles. If you had initially aimed to submit in 2021 but have had to defer one essay title can come from the 2020 list.
* Essays should be 3000 words (±10%) with a font size of at least 12 point. Figures, tables and their respective legends and the reference list are not included in the word count of the essay.
* Candidates must use appropriate material from various sources within both essays and these must be referenced in either the Harvard **or** Vancouver format. Guidance on how to reference in either format can be found on the IBMS website here:

<https://www.ibms.org/education/ibms-qualifications-resources/>

* Candidates should note that the essays will be entered into the originality checking software system called Turnitin. This software produces a report that highlights not only how much text is similar to other sources but also where this material is located.

The similarity score that is produced as part of its Turnitin report requires the academic judgement of the examiners and the IBMS Head of Examinations to interpret whether this necessitates any action. Where plagiarism is detected, or if the similarity score is unacceptably high, it will be treated as academic malpractice and may have serious consequences. This could include the failure of the portfolio.

**Important Points to Remember**

The completion of the two essays forms parts of the portfolio requirements for the HSD. These essays help candidates to demonstrate to the examiners that they have a comprehensive understanding of a specific field of biomedical science and knowledge and understanding of current issues and developments which are key learning outcomes of the HSD. At this level, you should be able to demonstrate:

* a systematic understanding of knowledge and a critical awareness of current problems, much of which is at, or informed by, work at the forefront of the academic discipline
* a comprehensive understanding of techniques applicable to their own research
* originality in the application of knowledge
* a conceptual understanding that enables critical evaluation of current research in their discipline

In constructing your essays you should:

* critically evaluate/discuss
* judge the relevance and significance of information
* evaluate claims, inferences, arguments and explanations
* construct clear and coherent arguments
* form well-reasoned judgements and decisions
* integrate and appraise reading and research
* be original in your application of knowledge

**HSD Essay Titles for 2022**

**Cellular Pathology**

Critically appraise the role of infectious agent demonstrations in cancer diagnosis.

Discuss and debate the role of the modern-day histopathology laboratory in the study of liver disease.

**Clinical Chemistry**

Critically discuss the benefits and limitations of automated immunoassay.

**Key Starter References**

Cinquanta, L., Fontana, D.E. & Bizzaro, N. Chemiluminescent immunoassay technology: what does it change in autoantibody detection?. *Autoimmun Highlights* **8,**9 (2017). <https://doi.org/10.1007/s13317-017-0097-2>

Jenkins Colon, P., Greene, D. N. Biotin Interference in Clinical Immunoassays, The Journal of Applied Laboratory Medicine, Volume 2, Issue 6, 1 May 2018, Pages 941–951, <https://doi.org/10.1373/jalm.2017.024257>

Critically discuss the role of the clinical biochemistry laboratory in prenatal care.

**Key Starter References**

Springer, D., Jiskra, J., Limanova, Z., Zima, T., & Potlukova E. (2017) Thyroid in pregnancy: From physiology to screening, Critical Reviews in Clinical Laboratory Sciences, 54:2, 102-116, DOI: https://[10.1080/10408363.2016.1269309](https://doi.org/10.1080/10408363.2016.1269309)

Powe, C.E. Early Pregnancy Biochemical Predictors of Gestational Diabetes Mellitus. *Curr Diab Rep* **17,**12 (2017). <https://doi.org/10.1007/s11892-017-0834-y>

**Cytopathology**

Critically discuss the role of cytology in the identification of infections.

Critically discuss the action that can be taken to check and monitor the quality of Non-Gynaecological Cytology work

**Haematology**

Describe the mechanisms proposed for vaccine-induce immune thromobocytopaenia and thrombosis (VITT), and critically discuss assays available to diagnose this syndrome.

Relate the pathophysiologies of microangiopathic haemolytic anaemias to their manifestations in Blood Science laboratory analyses.

**Immunology**

Discuss the role of measuring autoantibodies in Autoimmune Encephalitis.

Critically evaluate the methods available for the measurement of lymphocyte proliferation.

**Leadership and Management**

Discuss ways of rapidly engaging with key stakeholders involved with your service in the event of a sudden service change and needing to respond rapidly. Include both pros and cons of such engagement activities and justify which methods would give the best inputs for service management and improvement.

Critically review values based staff recruitment and selection campaigns and how these differ from traditional methods of recruitment. Do you consider that this is an improved strategy or not, justifying your decision? How can these campaigns be ensured to ensure inclusivity in the context of staff equality and diversity.

**Medical Microbiology**

Review the changing dynamics of infections in the cystic fibrosis lung.

**Key Starter Reference:**

LiPuma, JJ. (2010). The changing microbial epidemiology in cystic fibrosis. *Clinical Microbial Reviews,* April, 299-323

Discuss the evolution of MDR-GNB within hospital settings, and speculate on how the COVID-19 pandemic has/may change this.

**Key Starter Reference:**

Baiou, A., Elbuzidi, A.A. *et al.* (2021). Clinical characteristics and riskfactors for the isolation of multi-drug Gram-negative bacteria from critically ill patients with COVID-19. *Journal of Hospital Infection*, 110, 165-171

**Transfusion Science**

Discuss the reasons why a serological crossmatch could be incompatible, and the pathways employed for its investigation.

Discuss the effects that monoclonal antibodies can have on patient’s red cell serology and the steps that can be taken to resolve this issue.

**Virology**

Critically evaluate the effectiveness of local, national and international responses to the SARS-CoV-2 pandemic. Outline the key requirements for the laboratory service as part of a future pandemic preparedness plan and how these could be put in place.

Using selected examples, discuss the mechanism of action of antiviral drugs and critically evaluate the role of the laboratory in treatment selection and monitoring of effectiveness.